DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR OCTOBER.

"Solemn, yet beautiful to view,
Month of my heart! thou dawnest here."

OCTOBER is here again, and now we know that Autumn has come in good earnest. All through *September* there lingered a memory of Summer. There were warm suns, and balmy airs, and green leaves, and we could scarcely realize that change and decay were so near. But with this month of OCTOBER, there come such decided tokens of another *presence* as to dispel all illusions, and we may as well bid farewell to the warm precincts of these cheerful days, nor cast one longing, lingering look behind. The cold, frosty mornings and ever shortening twilights are indications which we cannot mistake. It seems but a few days since the sun remained above the horizon an hour or two after our evening meal—since little children played "I spy," and "ball," out on the green, till almost nine o'clock, and when the mother's voice sought to gather the little flock under shelter for the night, they said, "why, mother, it is red in the west." Then in shaded lanes and quiet streets might have been seen the country youth, his face beaming under his broad-brimmed hat, sauntering slowly, with a muslin-robed damsel on his arm. Pleasant summer rambles, which careworn men and women will look back upon with mournful pleasure some twenty years hence.

But the little children must not play out there these chill October nights, and it is quite too cold for romantic evening walks. The listless saunter is exchanged for a brisker pace, and the broad-brimmed hat is hung on its peg to await the coming of another season.

The sad leaves are falling, too. Their gorgeous colors will soon fade away, and the "evergreen pine," the hemlock, spruce and firs, will come into repute. They have not made much show among the elms and maples this summer. But modest merit is sure to succeed at last, and persistent effort wins the day.

Yes, the sad leaves are falling, and few are so thoughtless as to witness their fall without some mournful, and yet salutary musings. Perhaps you followed some friend to the grave on an October day like this, many years ago, and you have never forgotten how the leaves rustled under your feet as you moved along toward the old red gate of your village grave-yard, nor how, as you passed under the great tree that grew at the entrance, two or three yellow leaves fluttered slowly down, and rested on the pall-covered bier. But you thought it was a more fitting time to restore dust to dust, than if the world were just blooming into spring.

But to those who have no special and personal associations connected with this season of the year, it always speaks lessons of earth's changes and earth's frailty—lessons trite and oft-repeated, yet ever new and impressive.

"I look to nature, and behold
My life's dim emblems rustling round,
In hues of crimson and of gold—
The year's dead honors on the ground;
And, sighing with the winds, I feel,
While their low pinions murmur by,
How much their sweeping tones reveal
Of life and human destiny."

But Autumn's tones are not all *mirror*. There are other voices that speak to us, besides those which tell of decay and death. There is a bracing atmosphere which brings strength to the enervated frame, and which makes us feel like walking

erect, as becomes the lords of creation, and taking in full draughts of the divine elixir.

In the orchard there are red and golden apples, some of which are ready for immediate disposal, and some are suggestive of winter evenings, when we

——"gather round the evening fire
And crack stale jests, that never tire."

There are pumpkins, large, round and yellow as a rising moon, and squashes, which, with their long crooked necks, look as if a flock of geese might have lain down among the withered vines and suddenly become transmuted to gold! Then there are rows of turnips, potatoes, cabbages and other vegetables, of humble pedigree, and of little beauty to the eye, but very useful in their day and generation. As we walk over our acres, and look at all these things, we have a little private "Thanksgiving" in our hearts; quite forestalling the one the Governor is going to appoint for November.

Out in the woods, there are chestnuts, which our juvenile friends will not forget if we do, for "going chestnutting" is one of the *events* of boy-life,—and the more delightful, we fear, because there is just enough of the savor of "stolen waters" about it to inspire an adventurous boy!

Most of us remember the additional zest given to a foraging expedition of this kind, when "Old Brown" or "Old White" came stalking under his own trees as if *he* were the thief, and *we* lords of the domain, till he came, as he thought, within collaring distance of some small culprit—but didn't we dodge him! Didn't we show him a clean pair of heels, and then when safely on the other side of the fence, derisively laugh as he stood shaking his cane at us in impotent rage, and vowing vengeance if ever we invaded his pasture again!

It was all very wicked, no doubt, but ever since the earliest "clearing" was made in this country, wild nuts and berries have, by tacit consent, been considered the lawful spoil of the first comer, and Young America does so hate to part with any inherited rights!

Thus have we strung together a few random thoughts suggested by the season, which we graciously leave our friends to pursue at their leisure.

If ever we are disposed to grumble at the approach of winter, let us remember our *polar* neighbors with their whale oil blubber, and be content. Or if, on the other hand, we only look mournfully back and sigh for the vanished summer, let us consider that it were wiser to enjoy the present season as much as possible, because a much sharper one is at hand.

"So October endeth,
Cold and most perverse—
But the months that follow,
Sure will pinch us worse!"

For the New England Farmer.

HAY AND STOCK IN VERMONT.

Mr. Editor:—Although the busy season of "haying" is not quite over, yet it will not do to neglect the journals, though I must confess it is rather dry times. Haying is nearly completed in this section of country, and the result is, from two-thirds to three-fourths of the usual quantity. The same bulk of hay is much heavier than last year's growth. Wheat never looked better, and is nearly ripe. Potatoes, ditto. Oats tolerable. Corn first-rate, stalks bulky, and earing thick. We had a "killing frost" the 27th of July, (if I mistake not the date,) on some very low grounds, and a very light one the morning of the 24th ult.

There are many wonders now-a-days for the marvellous, and among others was the "meteor", which was truly a splendid sight. Then there has appeared lately, a fiery red star, in the south-east. It is no doubt the evening star, but the story is circulated quite freely hereabouts, and is believed by the credulous, that it is a "fire balloon," sent up from the top of Moosehillock mountain, as it appears before dark, and is very bright But the most splendid, and surprising sight I ever saw, was witnessed on the evening of the 4th inst. It was a rainbow by moonlight. As the moon was just rising, the bow was nearly a half-circle. The colors were discernible, but not quite so bright as in the daytime; it lasted about fifteen minutes.

No doubt the speculating drovers will find it out soon enough without telling them of the fact, i. e., that many of the farmers in this section will be obliged to sell off, or kill many of their cattle and horses. Many a poor man is trimming up the road-sides and wet pastures, to get something to keep a cow on, but many will be entirely without hay when foddering time comes.

Now we want you to give us a little advice. Hay is now worth twelve dollars a ton, and very little to be brought at any price; will it pay to winter a cow, that usually would bring $10 or $12, or a horse, that in times of hay, would bring $25 or $30? Will stock of any kind bring enough more next spring to pay? Our market for stores has usually been southern New Hampshire, and Massachusetts. I suppose it is useless to expect any such market this year. T. P. Bailey.

Newbury, Vt., August 7, 1860.

Remarks.—The above communication has been inadvertently delayed. We hear of no special depreciation in stock that has not existed for some months past. The true policy is, we think, to winter all the stock you can, and feed it well, rather than to sell what hay you have, because if you cut off the stock, you cut off the means of securing future crops. There will be a demand for a great deal of good beef, before the disease will show itself much, if, unhappily, it comes at all.

The Birds of New England.—The attention of the reader is called to a highly interesting and instructive article in another column, upon this subject, the first of a series of numbers from our accomplished correspondent, "J. A. A."

AMERICAN AGRICULTURAL IMPLEMENTS.

The leading editorial article of the *Mark Lane Express*, an agricultural paper printed in London, of Oct. 31, 1859, is based on a fact that may well flatter American vanity as much as it seems to wound English pride.

The article commences with a eulogy on the commercial enterprise of the English people, which introduces a very flattering notice of the energy of British farmers. The writer congratulates the agriculturist that he is assuming to himself more and more of the national character. Like the merchant, the British farmer, when his own market gets a little dull or overdone, looks out for another; and just now is especially intent on making the most of every opportunity and of every available offer. Nor does he look in vain for new markets and new customers. "Brother Jonathan and his first cousin in the colonies," says the editor of the *Express*, "will buy his Shorthorns and Herefords at their hundreds or thousands each. The Emperor of the French will give, we hardly dare say how much a pound for his South Down mutton, and Yorkshire men have audience with the crowned heads of other countries by the favor of a Cleveland stallion, or a famous charger. The Esterhazys, and such leviathan cultivators of the Continent, have become accredited purchasers of our prize implements; while Boydell's traction-engine winds its way through the sugar fields of Cuba; and Crosskill's clod-crusher is in work on the plains of Athens."

Leaving these and many similar statements, so agreeable to the taste and feelings of English readers, to make their appropriate impression, the writer changes the subject and the scene.

It is in the middle of October, 1859, and the Agricultural Society of the Cape of Good Hope, in Africa, is holding its annual exhibition at Cape Town. As with us, it is a show of both stock and implements,—imported cattle and sheep, valued at upwards of five thousand dollars, being entered. The display of machinery is still more imposing, and estimated at four times the value of the beasts. That is to say, there are some twenty thousand dollars' worth of implements on the ground for the Cape farmers to pick and choose from. Among these there are no less than *forty-two* varieties of plows. The editor of the *Express* is not present; but, seated in his office in London, he writes as follows:

"We might even go so far as to imagine that Mr. Sutton, Mr. Barrett and Mr. Cole were on the scene, politely distributing their catalogues, and descanting on the premiums they had taken, and the wonders they had done. Alas! however, it is too well known that some of the finest flights of our poets, and some of the grandest efforts of our artists, have been to depict [illegible] actions that they really never took a part in. And so would it be with our pæan over what Granthan, Ipswich or Bedford did at the Cape Town plowing-match—for there was not one of them there. Of these forty-two varieties of plows for the English colonists to purchase, *every one of them was of American manufacture.*"

He also asserts that, not only was there no English plow on the ground, but in the whole twenty thousand dollars' worth of machinery, there was scarcely anything whatever of English make.

After noticing the declaration of some American, that better Shorthorns will be soon grown in the United States than in England, alluding to the fact that a colt brought over by Mr. Ten Broeck is "the first favorite for the Derby at this very time," and confessing that "in some descriptions of machinery we only follow their lead, and the best of our reapers and mowers are either invented or improved upon by Americans," the editor concludes his article with the remark: "We are unwilling to see ourselves 'cut out' in any quarter, but more especially among our own kith and kin."

It is a seasonable moment to introduce this subject, just as our favorite Mechanics' Fair is about to hold its Ninth Exhibition. We hope it may be the means of calling out every variety of implement and machinery used upon the farm, and that the farmers, with some portion of their families, from every part of New England, will visit the renowned Faneuil and Quincy Halls on this occasion. It may be made a holiday turned to pecuniary account.

LONG ISLAND LANDS.

We have before us a very interesting pamphlet upon "*The Plains of Long Island, N. Y.*," by WINSLOW C. WATSON, Esq., of Essex county, N. Y. From this pamphlet it appears that Mr. Watson has given those lands a close investigation, and his researches show them to be of a highly valuable character. He says, "I found it to be the general impression with intelligent men, that the farmers of Long Island enjoy, on account of the mild temperature of the climate, an average of about forty working days in the year more than those above the Highlands. * * It seems to be admitted that the island rarely suffers from drought. The sea air, always charged with moisture, constantly refreshes vegetation."

Mr. Watson speaks of the qualities of soil, cost of clearing, value of crops, &c., and shows that when a fair degree of intelligence and skill is expended upon them, they will return the most remunerating crops. The lands are certainly in the midst of the best markets in the world, with every cheap facility for getting their products to the [illegible]

For the New England Farmer.

JERSEYS AND AYRSHIRES.

I notice in the Boston *Cultivator*, of the 11th of August, an article of great interest to our farmers, on the "trial of Ayrshire cows" made in Scotland, in consequence of a prize offered by the Duke of Athol, for the cow which should give the largest quantity of milk in five days. Twelve cows were offered for premium, and the results of the four best are given, as well as the richness of the milk as tested by the lactometer.

If I am right in my figures, the four cows produced an average of one hundred and ninety-two pounds of milk in one day, and the average of the richness of the cream is twelve per cent. This is certainly a large yield, but the richness of the milk is not as great as I should have expected. I own four, and but four pure bred Jersey cows, and their milk is carefully and separately weighed at each milking, and tested by lactometers, holding a pint each, once during every month. I have taken at hap hazard a day's milking, the last that has been entered, from the slate, July 31. I find on that day that they gave but seventy-seven pounds of milk, against one hundred and ninety-two pounds given by the Ayrshire cows, but the average richness of the milk was twenty-one per cent., against twelve per cent. by the Ayrshires, tested by the lactometer. My Jerseys giving but seventy-seven pounds of milk, made over sixteen pounds of cream, while the Ayrshires, giving one hundred and ninety-two pounds of milk, made but twenty-two pounds of cream.

It must be recollected in comparing the quantity of milk, that we are in ignorance as to the mode in which the Ayrshires were fed—we only know that they were all kept up and treated together—nor do we know their condition as to the time of calving; but this we do know, that they were the four best out of probably the twelve best cows in the Ayrshire district where the trial took place. My Jerseys are not probably more than average specimens of their size, and have no grain, shorts or oil cake, feeding upon a rough, coarse pasture, and only now getting in addition to their pasture, the thinnings from my roots night and morning, in very small quantity. One of them is but two years old last winter, and dropped her first calf in April, and another calves early in October. All these considerations must be taken into account, in making any comparison, and if they are fairly weighed, it will, I think, satisfy almost any one that the old idea that Jerseys are poor milkers does not apply to them at the present time; the superior richness of their milk over all other breeds has never been disputed.

Now, Mr. Editor, I am not a rich, or a great man, like the Duke of Athol, but I will place in your hands fifty dollars, equal in value to the prize offered by the Duke, to be given to the owner of a pure bred Jersey cow which shall give the greatest quantity of milk in five consecutive days in the same month and days of the month on which the Ayrshire trial was made, the richness of the milk to be tested by the same sized and proportioned lactometer, provided you will undertake the task of seeing that the trial is accurately and fairly made, and provided twelve contestants can be found, willing to take a little pains for the purpose of ascertaining the maximum product of milk that a good Jersey cow will produce. I do not think it necessary the cows should be kept together, though it would be better that they should be treated alike. If kept separately, an accurate account should be given of the method of feeding, &c.

ESSEX.

REMARKS.—The time when the trial of Ayrshire cows spoken of took place, was last April, so that if any trial is desired here, there will be ample time before that month comes round again to make any necessary arrangements. The liberal proposition of our respected correspondent is in keeping with his constant and well-directed zeal in the cause. It will give us pleasure to second his efforts by any means in our power.

For the New England Farmer.

SUPERPHOSPHATE OF LIME IN CORN HILLS.

Compost of Superphosphate and Muck—A fine field of Corn—Improvement of a tract of worn-out "plain land"—Benefits of deep plowing and high manuring.

I have to-day been looking at two or three cornfields which are worthy of notice. My neighbor, R. Bradley, Esq., has a field of eight or nine acres of corn, on which he is trying an interesting experiment in the use of superphosphate of lime. The land having been for several years in grass, the sod had become too closely bound to produce well; and although it was not convenient to manure the land much this year, yet it was deemed expedient to plow it up and cultivate it in corn, preparatory to giving it a heavy dressing of manure next year. The field was broken up in November last, eight to nine inches deep, and in May last harrowed, then marked out in rows three and a half feet apart each way, a tablespoonful of superphosphate dropped in each hill, and the piece planted with corn, covering the superphosphate an inch deep with earth before dropping the corn. In one row, however, reaching through the middle of the field, a compost of superphosphate and muck was used, putting about a pint of muck and a tablespoonful of superphosphate in each hill. The compost was made up several days prior to use, so as to allow the strength of the superphosphate to become diffused through, and thoroughly absorbed by the muck.

I have been several times to see this row of corn, before to-day, that I might, at different stages of its growth, observe the effects of the mixture used in the hills. The corn in this row came up more evenly and vigorously than that in any other row in the field, and has maintained a superiority over the rest in color and size, at all times so apparent to the eye, that the row could at once be picked out. Not only is the growth of corn greater in this row than in the other rows, but the stalks are also more fully set with ears, and those larger than elsewhere in the field.

Where superphosphate is dropped raw into the hills, and comes in near contact with the corn, it is apt to eat off the young tender roots, and keep the corn back awhile, or until the earth has in a measure absorbed its strength, and thus more or less of the crop is retarded at a time when it

ought to be coming forward rapidly. But by composting the superphosphate with muck, it is so diffused and absorbed by the muck that the compost is in a state to nourish the tender roots at once, and send the plant forward with a rapid and healthy growth, giving it a remarkably deep green color. Then, too, the muck is sweetened and modified by the superphosphate, and furnishes a little fine vegetable food to nourish the corn in the fore part of the season, as well as makes a little mellow place for the roots to expand in. I can have no doubt, after what I have observed this year and last, but what if superphosphate is to be used in the hill for corn, it will pay well to mix it with old dry pulverized muck, in such proportions as to allow about a tablespoonful of superphosphate with about a pint of muck to each hill. The compost should be made a week or two previous to use, mixing it in a shed, or the barn floor, and keeping it under cover till used, and freeing the muck from lumps, sticks, &c., before mixing. If muck is not conveniently to be had, rich loam, or fine rotten mould from the woods, may be used with good effect.

Four or five years ago, Mr. Bradley purchased a tract of thirty or forty acres of old worn-out "plain land," and has from year to year since been bringing it, say eight or ten acres each year, into high cultivation. This year, he is redeeming the last portion of it, about two acres, from its sterile state, and has it in two fields of perhaps the very largest and best corn I have anywhere seen this season. The surface-soil of this plain had been quite exhausted by a long course of shallow plowing and close cropping with winter rye, as frequently repeated as the land would bear six or eight bushels of grain per acre. The soil had been so skinned to the depth of four or five inches, that ten acres of it would not support one cow decently through the summer—indeed, there was nothing of any value growing on it, after about the middle of July each year. The growth last year on the land which is now covered with such stout corn, was occasional sweet-ferns, mulleins, shrub pines, with here and there a few feeble poverty-stricken grasses.

This tract of land has however one important redeeming quality. Underlying the shallow-plowed and worn-out surface, there comes a fine-grained, salvy, unctuous subsoil, in texture between a sandy and a clay loam, which, when brought to the surface by deep plowing, exposed to atmospheric influence and mingled with compost manure, becomes a very active and desirable soil for tillage purposes, one which stands dry weather well, and does not bake or become hard and crusted over in a wet season. When first brought to the surface, it is of a pale yellow color, but by exposure to the air and to cultivation, soon changes to a good deep brown. The unctuous quality of this subsoil, as it is taken in hand and worked by one's fingers, does not exist in the surface-soil; that is gritty, and crumbles in loose particles; while the subsoil is soft and waxy. Mr. Bradley early determined that his best chances for speedily converting this tract into productive tillage land, lay in bringing up and cultivating the subsoil; and accordingly each portion of the plain when taken in hand for tillage, has been plowed deep at once.

In November last, the portions now in corn were plowed with the sod and subsoil plow, ten to twelve inches deep. In May last, the plowed land was manured with forty ox-cart loads of compost to each acre, about thirty-five bushels to each load, made of about equal parts each of muck and stable manure. The compost was plowed in, four to five inches deep, with a light, sharp plow, guaged to the proper depth by a roller on the beam. The manure was thus placed where the mellow soil closed all around it, absorbing and holding its goodness, and yet keeping it near enough to the atmosphere to undergo a speedy and fertilizing decomposition, and where it is readily available to the growing crop in all stages of its progress.

After plowing in the manure, the field was lightly harrowed, then marked off each way in rows three and a half feet apart, a tablespoonful of superphosphate was dropped in each hill, and the corn planted, covering the superphosphate well with earth before dropping the seed. The corn came up well, and has been twice hoed, using the cultivator each way between the rows, at each hoeing. The corn at this time is of very large growth and splendid color, the great lusty ears standing out in every direction, presenting a striking contrast with the vegetation standing on the same land one year ago—indeed, one wonders at the change, as he realizes how great it is, and he is struck with what the art of man can do in the improvement of land, when rightly directed. The present crop of corn—accidents before harvest excepted—will fully pay every expense that has been laid out on the land on which it stands, leaving a greatly improved field, for the production of good crops for several years to come.

The other portions of this tract of land have been treated in precisely the same way as that above described, so that now the whole has been brought from a sterile, unsightly barren, to handsome, smiling fields of grain and grass. The first portion, deeply plowed, highly manured, and planted with corn three years ago, is now in mowing, producing a good quality and quantity of grass. The next portion, in corn last year, was sown with oats, and stocked to grass this season. The men are now harvesting the oats, and the crop is very stout, and the catch of grass perfect —showing the excellent qualities of this upturned and cultivated subsoil for resisting drought and taking grass kindly; for at sowing-time, we had hereabouts very dry weather, which lasted well into June. Preparatory to sowing the oats, the land was plowed one or two inches deeper than when the manure was plowed in last year for corn, so as to bring the manure within immediate reach of the roots of the oats and young grass, and yet a little below the surface, to keep it from drying. Probably two tons of hay per acre will be cut next year on the land that produced oats this year.

It appears to me that the improvements effected on Mr. Bradley's old worn-out plain, are a satisfactory demonstration of the advantages of deep plowing, accompanied with high manuring, wherever there is a good subsoil to operate on. As I have remarked in former communications to the *Farmer*, many of the fields in the older settled districts of New England have a compact, fine-grained and fertile subsoil, but wholly or mostly unavailable to the crops, because, by a course of

invariably shallow plowing, an artificial hard pan has been formed within four to six inches of the surface, through which the roots of the crops seldom or never penetrate. By at once breaking through this crust, bringing up the subsoil, and exposing it to the atmosphere and to high cultivation, a remarkable freshness, mellowness and vigor is given to the land, the labor of the after-cultivation is much lessened, the soil, thus deepened and improved in mechanical texture, better resists the effects of extreme drought or moisture, the roots of vegetation having an enlarged range for food, moisture, &c., the crops are thereby increased, and when the land is again laid down to grass, the sod does not quickly become bound, because the roots, having a deep range, do not so soon web themselves together near the surface. The writer has seen some fine illustrations of the advantages of this kind of cultivation, several of which he has heretofore described in the *Farmer*, and about others of which he will have something to say hereafter. Notwithstanding that "tradition" is against him, he will not let the subject rest.

F. Holbrook.

Brattleboro', August 10, 1860.

VALUE OF TANNER'S BARK.

Seeking shelter from "a gust," the other day, we entered the new and fine barn of Mr. Albert Gates, of Stow, Mass., and after getting away from the wind and rain, which were becoming a little furious, about the first thing we noticed, was, that the leanto floors were sprinkled with dry tanner's bark, and that an ample quantity of it was conveniently stored up for daily use. Mr. Gates said, "most people look upon it as valueless, that it possesses no fertilizing properties whatever, and that the value of its mechanical influences upon the soil will not pay the cost of carting and application: but he thought differently. He had used it on sandy and gravelly lands with good effect, and he liked it on his leanto floors in the summer."

Though possessing some qualities capable of rendering it highly efficient when appropriated to purposes of enrichment, this article is yet rarely applied in this country as a stimulant to growing crops. Large accumulations of spent bark may be seen in the vicinity of most of our tanneries, where it might be obtained in any desirable quantities, and at a very low cost.

The following remarks, which we copy from the *Mark Lane Express*, (English,) relative to the value of this agent, are deserving of some regard:

"New Manure.—Immediately adjoining the farm I occupy, is a tan-yard, with about twenty acres of poor clay land attached; it is so situated that I can, from my own fields, survey the whole at a single glance. A few years since I observed, in the middle of one of the fields a small piece which was at the time tilled to wheat, and looking very luxuriant; knowing that no manure heap had been placed there, I went to examine the cause, when the tanner, who is an experimental farmer on a small scale, informed me that he had taken from the yard, four or five barrels of waste hair, and spread it upon this spot of about two yards. He has likewise turned to account the rotten tan from the yard by placing it thick in the orchards, and seldom fails of a good crop of apples; the trees look very healthy, and throw their shoots very strong; he is now drawing the waste tan on the roads to be trodden up, preparatory to its being used as a manure for land."

The author of the foregoing is Mr. Doble, an English gentleman, distinguished alike for his high scientific attainments, and his warm attachment to the farming art, which he has indefatigably labored to improve.

Where pure tanner's bark is used as a manurial application, it should be mixed with a considerable quantity of lime in a caustic state, and permitted to remain some time to *rot*, before being spread. In the foregoing case, the tan bark was doubtless *oak bark*—the English tanners employing that article, exclusively, in the preparation of their leather for the market. By mixing the refuse of the tan-yard with mould, muck, lime, crude ashes, &c., and composting it,—taking care in all cases that the quantity of caustic lime, or unspent ashes be sufficient to destroy the remains of the tannin in the bark, it may, no doubt, be made to contribute essentially to the fertility of any soil to which it may be applied.

In the centre of one of the pleasant villages of New Hampshire, there is a piece of land that was several years ago a mere tract of sand, that had never been known to produce any green thing upon it save here and there a half-starved running blackberry vine, or a stunted product of some hardy weeds. This land is now said to be *the most productive piece of land in town.* The owner informed us that he brought it to its present state of fertility mainly by the use of spent tan —that he applied it plentifully at first, and plowed it under ten inches deep, added a little manure and planted the land. This course he continued for several years, encouraged annually by the increasing crops, until he brought the whole field to its present high state of fertility.

In many of our New England towns there are large quantities of this material which may be had at trifling cost, and the success of this experiment may encourage others to make trial for themselves.

☞ The *Country Gentleman* says: We are informed that the amount of butter sent from the Greenfield station to Boston, for the year ending July 15, 1860, reached a total of 201,576 lbs., 100 1576-2000 tons. The number of cars of stock sent to Cambridge during the year was 242; of which 142 were sheep, averaging 12,780 sheep; 100 were cattle, averaging 1500 cattle; total, 14,280.

For the New England Farmer.

WOMEN AND FARMING.

MESSRS. EDITORS:—I notice that one or two farmers' wives have made an effort at being heard through the columns of your paper, and if you will allow a farmer's daughter a similar honor, she will be much pleased. It is a well established fact, though not often discussed, that farmers' wives are the most hard-working class of ladies in existence, for the reason that they are actually *compelled* to be thus. We would ask if farming cannot be made sufficiently profitable to relieve every housewife of that amount of extra care and labor which she endures beyond what her physical strength is really capable of enduring? If not, young ladies have a reasonable excuse for not choosing farmers for husbands. Not that we would in the least depreciate so noble an employment, but would awaken the sympathy of the "lords of creation" for those wives and mothers who are compelled to bear up so bravely under ceaseless toil; whose vigils are disturbed only by the sonorous slumber of their husbands or the care of infancy; whose knowledge is rarely increased by time for reading and study, and whose ideas of human nature and the world are limited to their own native village.

I would refer to a young lady, a farmer's daughter, whose nature seems averse to the life she leads. She possesses more than an ordinary thirst for education, but alas, the profits of the farm are not sufficient to furnish means to expand the bright germs of intellect. She is excessively fond of music too, and can say,

"Music, O, how faint, how weak,
Language fades before thy spell;
Why should feeling ever speak,
When thou canst breathe her soul so well?"

Yet when she suggests the propriety of a piano, father says, "The washboard must be your piano, for I have not the means." It may be said the shrewd can have means, but 'tis not always true of the farmer, and I would ask, should this young lady marry a farmer, or not?

Permit the farmer's wife to labor reasonably, provide her with books, pictures, music, and such things as accord with her taste and nature, and I venture to say she will be the most happy and honored among women, and truly adapted to her station, as mother and teacher. She can understand the teachings of nature, she can appreciate the loveliness of Spring, the fragrance of Summer, the rich harvest of Autumn, and the sublimity of Winter's storm. And with the farmer's wife thus educated, could we not hope for the elevation of a future generation? Why will not mankind see to it, and if possible render farming profitable as well as pleasant, and the farmer's wife educated and useful. No class of ladies can be better situated to embrace life truly, or develop refinement and genius, than the farmer's wife, if she can be allowed sufficient time and means.

A FARMER'S DAUGHTER.

Enfield Centre, N. H., 1860.

REMARKS.—If "*A Farmer's Daughter*," who writes us, has been a mechanic's wife, or has lived for a series of years in the family of a mechanic, we will confess that she is qualified to judge whether "farmers' wives are the most hard-working class of ladies in existence," or not. We think she is in an error, while we think at the same time, that the wives of most farmers do work too hard. The piano and pictures, and many other articles of taste and luxury, are already on a good many farms, and are still finding their way there every day.

Does no mechanic ever say to his daughter,—"the wash-board must be your piano, for I have no means" to furnish any other? And are all professional men exempt from the necessity of such a reply—the clergyman, lawyer, physician, judge, artist and literary man?

It would be scarcely gallant for us to pronounce upon the fate of the young lady you introduce. We can only say that if she were our daughter, or sister, we should prefer her marriage to a farmer, rather than to a fourth-rate lawyer, or a doctor starving in his circuit of thirty or forty miles per day.

It is an evidence of intellect and power to rise above what are called adverse circumstances, to put them under our feet, and acquire those positions or things which we desire by a well-directed and indomitable will. All will not succeed, but many will.

IMPORTANT DATES.

The following will refresh the minds of our readers as to the dates of the most important inventions, discoveries and improvements, the advantages of which we now enjoy:

Violins invented, 1477.
Pumps invented, 1425.
Paper first made of rags, 1417.
Almanacs first published, 1470.
Spinning wheels invented, 1330.
Spinning jenny invented, 1759.
Camera Obscura invented, 1515.
Printing invented by Faust, 1441.
Engraving on wood invented, 1460.
Roses first planted in England, 1505.
English shilling first coined, 1505.
Diamonds cut and polished, 1489.
Punctuation first used in literature, 1520.
Gun locks invented at Nuremberg, 1517.
Watches first made at Nuremburg, 1504.
Soap first made at London and Bristol, 1504.
Theatrical exhibitions first given in England, 1378.
Muskets invented and first used in England, 1421.
Post offices established in England, 1464.
Printing introduced into England by Caxton, 1474.
Maps and charts first brought to England, 1489.
Fortifications built in the present style, 1500.
Sugar refining first practiced by the Venitians, 1503.—*Wisconsin Farmer.*

HE that would know what life is must have its trials as well as its joys.

THE COMMON, OR SMOOTH, SUMAC.

This shrub, or sometimes small tree, is occasionally introduced into the grounds about dwellings, and where it has plenty of room to branch out, forms a fine contrast with other shrubbery and trees. It branches very irregularly, which leaves an open head, so that other plants are readily seen through it. It flowers in June, and its berries are matured in September or early October, and may be found all over the eastern slope of the Union. Whether it is common in the West, or not, we have never learned.

A vigorous plant, and one that has fully fruited presents a very pleasant appearance, after its berries have assumed their autumnal purple hue.

The berries are used in coloring morocco, and are a somewhat important article in commerce. We are not aware that it is injurious to the farmer, otherwise than, as it is a hardy plant, it propagates itself rapidly when left unmolested.

For the New England Farmer.

CROPS IN IOWA.

Not until to-day has our crop of wheat been really secure, though we have seen *reports* to that effect, in the Eastern papers, for weeks. Two days ago, nearly one-half the wheat in Cedar, and many other counties of Iowa, was unstacked, with frequent showers and a very warm and sultry atmosphere, which, had it continued a short time longer, would have essentially damaged a large amount of our ample, excellent, and now *secure* crop. The late showers have put the corn and potatoes out of danger from drought, and our prospects for unprecedented harvest are very flattering.

I have frequently, and honestly, written discouraging letters about the West. I can now, as honestly, write one of a different tone. Indeed, I might almost repeat what I wrote some four or five years ago, about a certain "farm in Iowa," which cost the owner $8 an acre, and which he proposed to nearly pay for, with the first crop of wheat. Why not? Figures, properly used, will not lie.

Here is my neighbor Starr, for instance, with 25 bushels of wheat to the acre, on land broken for the first time last year. At 75 cents per bushel, the current price at Muscatine and Davenport, that would be $18,75 per acre. Allowing one-half for cost of raising and harvesting, and we shall have left $9,37½ per acre.

But, just as good land as his or mine, can now be bought in Cedar Co. for $5 an acre; and certainly that can be paid for in one year, like the present. And there is my friend McNeil, "the bee man," (one of your subscribers,) rather badly in a year ago; but this year making honey and money, at the same time, at a rate that will clear him up, if no unusual disaster occurs, in another year. With Langstroth's hive, and a perfect *penchant* for bees and their work, he is like David "as a wonder unto many." In fact, it seems to run in the blood, for a bee seldom stings either him or his children, though they are among them all the day. And if a unamiable "worker" happens to light on the baby, as one did yesterday, it hardly hurts him enough to make him cry.

On the whole, we can now venture to invite our Eastern friends to come to see us, and *buy a bit of land*, which is as cheap as it ever can be, and as anybody ought to desire. M. K. C.

Tipton, Iowa, Aug. 10, 1860.

Importation of Stingless Bees.—Our old friend, A. O. Moore, Esq., who has done a world of good by his agricultural publications, and who went to Central America last year on account of his health, has just returned from Guatemala, and has brought with him two swarms of the stingless bees common to that country, which he has given in charge of Mr. Parsons, of Flushing, who will propagate them for the Agricultural Department of the Patent Office, which will in due time distribute them, if it is found that they can be kept in any part of the United States.

Satan is on the tongue of him who slanders, and in the ear of him who listens.

For the New England Farmer.

INFORMATION ABOUT WINTER WHEAT.

MR. EDITOR:—I seem already to have been anticipated in my inquiries in part, on the subject of wheat-growing, by your intelligent correspondents, "P." and "R. B. H."

It is well known to you and your numerous readers that I have been for the past fourteen years a zealous, and by some thought a fanatical advocate for wheat-growing in your midst. In my early attempts, which were eminently successful, an open influence was brought to bear prejudicially by a popular agricultural journal, which doubtless palsied the energies of many who were ready to move. But the thing now is a well developed, well established fact, and should deeply interest every New England man that tills the soil.

Your welcome correspondent, "R. B. H.," truthfully says, "By the way, wheat is becoming a staple in this region." "P." briefly says to the point, "Wheat will grow in Massachusetts as well as elsewhere."

Most heartily do I confirm both statements by an experience of six consecutive years with winter wheat, (a much safer crop than spring,) in the good old town of Andover, giving me an average of twenty-five bushels to the acre for the whole term. This story has been so many times told to your readers, they may look upon it as a familiar tale, but I beg to say, it would be a profitable catechism to remember and put in practice, the last of this, or the first of next month.

Never have I despaired since the commencement of my own experience, that New England would, in due time, raise all the wheat necessary for her rural population, and more or less for her seaboard and inland cities.

Fifty times repeated have I said, no grain crops will produce half the money per acre with wheat. A trial will prove it.

The mowing patches, alluded to in my last, not yielding over one-half to three-fourths of a ton of hay per acre, well manured, would yield 25 to 30 bushels of wheat, or 15 to 20 bushels without it. Now in the coming season of leisure, how quick, cheap and easy a few acres of wheat can be made for next year. Your hay on this land would be worth $5 to $7. The lowest calculation—say 15 bushels wheat, worth $30, and the straw in market is worth more than the hay. Your wheat is clear gain. Facts are stubborn things, Mr. Farmer. Is it not an object to try it? Sod land is best for winter wheat. H. POOR.

Brooklyn, L. I., Aug., 1860.

THE HAW OF THE HORSE'S EYE.—A correspondent of the New York *Commercial Advertiser* communicates the following description of this membrane from Sir G. Stephen's adventures in search of a horse:

"There is another variation between the horse's and the human eye, of a very important and peculiar character. At the inner angle of the eye is a dark membrane that, apparently at the pleasure of the animal, is shot rapidly over the eye like a veil; it is instantly withdrawn, and in its rapid transit cleans the eyeball of dust or foreign particles that may have accidentally lodged upon it. This membrane is called the *haw*. It is not muscular, but its action is curiously explained; it is projected from its place by the compression, or rather depression of the eyeball into the socket, occasioned by the retractor muscle. When the eye is depressed by the play of this muscle, the elasticity of the fatty substance behind the eyeball causes the haw to extend itself from the corner of the eye, over the visible surface; when the retractor muscle ceases to act, the eyeball resumes its usual position, the fat returns to its place behind, and the haw returns to the socket from which it has been momentarily pushed forward.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 1.

Upon commencing a series of articles upon the Birds of New England, it may be well, in the way of a few introductory remarks, to present some general observations upon that class of beings called birds; and more particularly upon their classification by naturalists, and the terms employed to designate the different groups, with which the general reader may hardly be supposed to be familiar.

Birds are regarded as holding the second rank in the scale of animated nature, in point of intelligence and perfection of form, regarding man as the type; and though falling below quadrupeds, yet far surpass fishes, and the other lower classes of animals, both in sagacity and perfection of structure. As a class they are strongly marked, and widely separated from all the others. Their whole form adapts them eminently for flight in the yielding air; and though differing greatly among the different orders, are yet connected, in many instances, by almost imperceptible gradations, so that from the powerful, soaring eagle to the swimming and wading water fowl, or to the little, harmless wren, there is no sudden transition; and, indeed, it often happens that there is so much alliance between the different species of some groups, that they are only distinguished by close comparisons.

Birds are chiefly distinguished from the other warm-blooded, vertebrated animals, by their oviparous generation, in being clothed with feathers, and having the anterior members modified into wings, or organs of flight, and are the only animals possessed of true flight, save the bats, that have an internal skeleton. Their whole body is light, the bones hollow, and their general form is well adapted to cleaving the air. There are birds, however, whose wings are too small to support them in the air, but assist them in running, as in the ostrich, or in diving and swimming, as in the auks and penguins. The lungs of birds are very extensive, and their respiration is very perfect; their blood is found to be 12° to 16° warmer than that of other warm-blooded animals. The organs of the senses are similar in birds to those of mammalia; the sight, however, is developed in a remarkable degree, and the eye possesses great powers of accommodation to different distances. "Birds perceive even small objects distinctly, at distances at which they would be quite indistinguishable to the human eye, and are thus enabled to seek their food. Birds of prey also appear to possess in great perfection the sense

of smell;" but touch and taste are not much developed, save the latter to some extent among the parrot tribe. Hearing, however, is exquisite among the owls, and many nocturnal water birds.

The number of species of birds now existing, is variously estimated at from 5000 to 8000; and among this multitude, possessing widely different habits, and inhabiting various situations, we may look for modifications of their members, adapting them for these varied situations and circumstances. And upon these modifications are based the natural division of birds into orders, families, and genera, &c.; but more particularly confined to the beak and the prehensile organs, or the feet; though their general form, and anatomical structure are taken into account. The first division into land and water birds is sufficiently obvious; but naturalists differ much in respect to the number and value of the minor divisions; thus, while Linnæus and Cuvier make but six orders, others erect from twelve to sixteen, and still others, among them many eminent modern ornithologists, reduce them to five, by including the order *scansares*, of Cuvier, as a tribe, or sub-order, among the *insessores*.

The birds of prey are generally placed first in the list, constituting the order *raptoros*, (or *accipitres*, of Cuvier; Latin, *accipiter*, a hawk,) and are characterized by their daring and cruel spirit, powerful structure, hooked beak, and strong, curved claws, and by their preying upon birds, and the weaker quadrupeds. They include the vultures, eagles, hawks, buzzards, kites and owls.

The second order, and by far the most numerous, comprises the so called perching birds, or *insessores*, which will be more fully noticed hereafter. Cuvier observes, "Its character seems, at first sight, purely negative, for it embraces all those birds which are neither swimmers, waders, climbers, rapacious, nor gallinaceous. Nevertheless, by comparing them, a very great, mutual resemblance of structure becomes perceptible." The climbers, however, will be treated of as a part of this order.

The third order, *rasores*, embraces the poultry, or gallinaceous birds. The fourth order, *grallatores*, includes the wading birds; and the fifth order, *natatores*, will embrace the swimming birds. These last orders will be more fully noticed hereafter.

The orders admit, upon natural characteristics, of divisions into tribes, or sub-orders, and these again into families and genera. The birds of prey are generally divided into diurnal and nocturnal; the former including all the proper rapacious birds, except the owls, which constitute the latter division.

Of the diurnal birds of prey, we will first notice the rather limited family of the vultures, (*vulturida,*) of which, however, New England can hardly claim a representation. They are birds of the largest size, of indolent and excessively filthy habits, feeding on any animal food that they can easily tear in pieces, and the most putrid and loathsome carrion does not come amiss. They are cowardly, and generally inoffensive, seldom attacking living animals, and only when pressed by hunger, and in companies. They detect their carrion food at a great distance, by the sense of smell, as is generally supposed, and often gorge themselves till they are unable to rise from the ground. Chiefly inhabiting very warm climates, they most effectually perform the office of scavenger, and are generally protected by law, in the countries they frequent, for the valuable services thus rendered.

The noted condor of the Andes, (*vultur gryphus*, Linn.,) of great size, and said to fly the highest of all birds, soaring to the height of more than 20,000 feet, or about four miles above the sea level, belongs to this family; as also does the celebrated bearded vulture, lamb-killer, (*vultur barbatus*, Gmel.,) of Europe, but approaches the eagle in its more courageous spirit, attacking lambs, goats, and the chamois, and it has been known to carry off children!

Of the vultures inhabiting the United States, the California vulture, (*cathartes Californianus*, Cuvier,) inhabiting California, is the largest, approaching the condor in size. The black vulture, or carrion crow, (*cathartes atratus*, Rich and Swain,) though common in the Southern States, is seldom found to the northward of North Carolina, but inhabits the whole continent southward to Cape Horn. They are of quite singular habits, as the following extract from Wilson's American Ornithology indicates:

"In the towns and villages of the Southern States, particularly Charleston and Georgetown, South Carolina, and in Savannah, Georgia, the carrion crows may be seen sauntering about the streets, sunning themselves on the roofs of the houses and the fences, or if the weather be cold, cowering around the tops of the chimneys, to enjoy the benefit of the heat, which to them is a peculiar gratification. They are protected by law, or usage, and may be said to become completely domesticated, being as common as the domestic poultry, and equally familiar. The inhabitants generally are disgusted with their filthy, voracious habits; but, notwithstanding, being viewed as contributive to the removal of dead animal matter, which, if permitted to putrefy during the hot season, would render the atmosphere impure, they have a respect paid them as scavengers, whose labors are subservient to the public good."

It is also said they are extremely indolent, and that they will not eat of a carcass until it has become putrid, unless pressed by hunger.

The only representative of this singular and repulsive, yet useful class of birds that New England can lay claim to, is the turkey vulture, or turkey buzzard, (*cathartes aura*, Ill.,) which is said to inhabit as far north as Nova Scotia, but is exceedingly rare in the Northern States, being only met with occasionally, but is quite common towards the South. In the zoological report of Massachusetts it is not mentioned as one of our birds; but Dr. DeKay, in the Natural History of New York, speaks of it as occasionally seen in that State; and probably it sometimes strays into the southern parts of New England, in the warm season. They, however, breed extensively in the deep recesses of the solitary swamps of New Jersey, hatching in May. No nest is made, but the eggs, two to four in number, of a dirty white, or pale cream color, splashed all over with chocolate and blackish touches, are deposited on the rotten wood of a hollow stump, or log. Upon the approach of any one to the nest, with attempts to handle the young, "they will immediately vom-

it such offensive matter, as to compel the intruder to a precipitate retreat." They are of the usual indolent and repulsive habits of the vultures; and Mr. Audubon, comparing them to a garrisoned half-pay soldier, observes: "To move is for them a hardship; and nothing but extreme hunger will make them fly down from the roof of the kitchen into the yard."

The turkey buzzard is two and a half feet in length, and measures six feet, two inches, across the extended wings; possesses a lofty, soaring flight, and, in common with the other vultures, has the head and neck bare of feathers; the under parts of the plumage are of a sooty brown color; the upper, black or brownish black glossed with green and bronze, with purple reflections. They are gregarious and harmless in their habits, never attacking living animals. J. A. A.

For the New England Farmer.

CULTURE OF WHEAT.

A few days since, I adverted to a fine field of wheat, now standing, on an average, more than five feet in height, on land of Gen. Sutton. I have since heard of other fields of equal promise, on lands of Mr. Brown, Mr. Berry and others. What surprises me is, that so few should cultivate a crop so desirable, when it can be grown with so much certainty, and with so little chance of blight. Most farmers, when about to lay their land down to grass, use barley or oats, and not wheat. Would not wheat be twice as valuable, and equally favorable for the coming crop of grass?

Perhaps the reason why blight does not come upon the grain while growing, is, that care has been used in the selection of the variety to be grown. If by a little care thus applied, a bountiful harvest can be secured, of one of the most palatable and essential supports of life, is it not the duty of all who have land suitable, to see to the growing of this crop? If my recollection is right, some thirty years since, there were many farmers in Massachusetts, who grew their own wheat. Then, for some cause, I know not what, the culture of wheat fell off; and a field of wheat became almost as rare a sight, as that of a white crow. I entertain the hope that a better time is coming, and the fields before mentioned give evidence of this. P.

August 6, 1860.

NUMBERING SHEEP.

A correspondent of the Battle Creek, Mich., *Jeffersonian* gives the following description of a plan for ascertaining the amount of wool produced by each sheep of a flock belonging to a New England friend whom he had recently visited:

"We were handed a sheet of paper upon which was noted the weight of fleece of each sheep in the flock; opposite was set the number of the sheep, a corresponding number having been branded upon the animal itself at the time of taking its last clip, by applying a mixture of lampblack and tar with cast-iron figures. This course had been pursued for some years, and its results were apparent in a wool crop brought up from an average of four pounds to over five, and a corresponding increase in the size and quality of sheep. The practice had been to slaughter and otherwise dispose of all animals ranking lowest in weight of fleece and to improve upon the quality of the remainder by judicious crossing."

EXTRACTS AND REPLIES.

Ludlow, Vt., Aug. 14, 1860.

Mr. Brown:—After an illness of over five months—an illness resulting from confinement to a sedentary employment in your city—I am once more enjoying the mountain air and the mountain prospects of my native State. To appreciate my enjoyment of the rides and rambles which I am now taking among these hills and valleys, one must have experienced the pleasurable sensations of returning health under similar circumstances.

Vegetation looks finely. There has been no drought here this season, and crops now give promise of an abundant harvest. There is some complaint about hay being rather light. There is considerable yet to be cut, and I believe farmers generally admit that the quality of hay is good, and the amount nearer an average than was expected early in the season. Showers have been frequent for about a week, and yesterday and to-day have been decidedly rainy. Fears are expressed that the grain which is cut and stooked in the fields will be damaged by sprouting. Considerable wheat is raised in this vicinity, and this, as well as other grain, is said to be well filled and heavy.

Garden crops look remarkably thrifty in this town, so far as I have observed; and particularly is it true of those in the village, where nearly every square rod of spare land is waving with an almost tropical richness of vegetation. Fruit trees are well laden, and even plum trees are bending with the weight of clusters of fair, smooth plums. I have looked at the fruit in several gardens, but have not seen a single mark of the curculio; and it seems to me that other troublesome insects are far less destructive here than in Massachusetts.

There is a woolen factory in this village, at which the operatives commence work at 5 o'clock in the morning, after half an hour's ringing of the bell, and close their day's labor at 7 o'clock in the evening, with a vacation of half an hour each for breakfast and dinner. Is not thirteen hours a day too many to compel boys and girls, men and women, to work in the noise and confinement of a factory? For a few weeks in the hottest weather, the dinner-time is extended to three-fourths of an hour. Yours truly,

A City Mechanic.

Remarks.—We are delighted to hear of the returning health of one of our valued friends and most intelligent correspondents, and fervently wish that firm health and a prosperous life may long be his right and left hand supporters.

CULTURE OF WINTER WHEAT.

I wish to know how to raise winter wheat; I shall make the attempt this season, and wish for all the information within reach to assist me

Inquiring among my neighbors, I almost invariably get for an answer, "Don't know; never grew it; can buy cheaper;" &c., &c.

Now, will you be so good as to insert in the *Farmer* as soon as convenient, replies to the following questions:

1. The depth the ground should be plowed?
2. Best kind of seed?
3. Time of sowing?
4. Quantity per acre?
5. How deep to cover the seed?
6. What quantity and quality of manure?

West Roxbury, Aug. 9, 1860. W. D. H.

Remarks.—We cannot do better than to give you the practice of Mr. N. F. Morrell, of Sanbornton, N. H., as contained in a letter of his published in the monthly *Farmer*, for July, 1859.

"Hundreds of farmers in this State do not raise this grain, simply because they think they cannot. I have tried both upland and intervale, and find it does best on upland where I never manure it. I always select good warm pasture land, (the older the better,) free from strong winds and standing water, and where the snow remains on as long as on any part of the farm. Break it up any time in July or August. Sow from the 20th of August to the 1st of September, at the rate of one and a half bushels per acre. Get it in two or three inches deep, if possible, with a plow or cultivator. After it is up, a coating of plaster, lime or guano, will help it very much, especially if dry. Prepare the seed the same as for spring wheat. Wash thoroughly, pickle in strong brine twelve hours or more, and mix with ashes or slaked lime.

In this way I get from twelve to fifteen bushels per acre, and think it doing well without manure. Have never tried manure on upland, but presume it would do well.

The kind of wheat called the White [Winter? Ed.] Blue Stem stands winter best. I have raised the above quantity, per acre, without applying anything but dry wheat, and simply harrowing it in."

—

SLATED ROOFS AND LIGHTNING.

In conversation with a friend a few days since, (a practical slater,) on the subject of electricity, he remarked that buildings covered with slate were as surely protected against the evils of lightning, as they could be by the rods commonly used; and in confirmation of the fact stated that lightning had not been known to strike within a distance of forty miles of slate quarries that are wrought. This was to me a new idea, altogether; and, if true, a fact of too much worth not to be generally known. The trifling difference in cost of roofs between shingle and slate is more than compensated in the protection which may be afforded in the use of slate. Now, sir, as you are supposed to know about everything, and have access to almost everybody, I hope that through this medium the facts may be brought out; and by so doing, you will render great service to your country. M.

Wilbraham, Aug. 9, 1860.

Remarks.—We are fortunate in having a large number of intelligent *querists* and *correspondents*, and have no doubt some of the latter will shed light upon this subject.

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FOWL MEADOW GRASS SEED.

I last week made inquiries as to the best kinds of grass seeds to mix with fowl meadow to be sown on low land. I now wish to inquire where the fowl meadow grass seed can be obtained, as I have not been able to find it? F. R. Cragin.

Woburn, Aug., 1860.

Remarks.—When it can be procured it is sold at the agricultural warehouses in Boston. The supply for three or four years past has not been equal to the demand. As the grass is an exceedingly valuable variety, and the seed is in demand, we hope large quantities of it will be brought to market.

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GRAPE CULTURE.

In the August number of the monthly *Farmer* I find an article on "Grape Culture" from the pen of Mr. E. A. Brackett.

Reading that article has suggested to my mind several questions which I should be pleased to have Mr. Brackett answer.

First, with regard to the manner of preparing the ground. Is it advisable to trench a strong, heavy soil as deeply as he did his? Would not one foot answer as well for such a soil, as two for a light sandy one? I have thought such deep trenching might favor a late growth of wood which would not be so well ripened as it would be if the roots did not penetrate so deeply.

Secondly, Are his vines protected from the winter? If so, how? I do not see how it would be possible to lay down vines trained upon the pyramidal plan.

Thirdly, With regard to the Diana grape, Mr. Brackett speaks of it as our most delicious native grape. Does he consider its quality superior to the Delaware, and is this last-named variety likely to prove to be as well adapted to this section as the Diana is? W. D.

Leominster, Mass., Aug., 1860.

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CORN AND SQUASHES.

I noticed in the last number of the *Farmer* a short article from Henry J. Durgin, of Shaker Village, N. H., which induced me to measure the height of a field of corn growing here in old Massachusetts. Its average height is about ten feet; it is uncommonly well set with ears, many stocks containg three and some four ears. It was planted about the first of June; no manure has been applied to the land this season. Last season it was planted to cucumbers and manured in the hill. My largest squash measures over five feet in circumference, and is growing rapidly. Yours for "some squashes" and "some corn." W. H. W.

Shaker Village, Aug. 11, 1860.

MOUNTAIN CRANBERRIES.

The demand for cranberries is every day increasing, and their cultivation is getting to be quite a study. Among the experiments which have for several years exercised the spirit of Yankeedom, is the endeavor to cultivate the common bog cranberry on upland. Where the upland is pretty moist, a tolerable degree of success has attended many of the experiments.

There is, however, a variety of mountain berry, belonging to the cranberry genus, which we think might be cultivated more successfully than the lowland kind. We last fall received a jar of this last kind from Rev. Mr. Pierce, of East Winthrop, who obtained them from Washington county, where they grow on the waste lands, and high lands in the Quoddy region. He also sent us a specimen of the vine which produces them. It proved to be what botanists have named *Vaccinium Vitis Idœa*, and called, commonly, "mountain cranberry," "rock cranberry," and "cowberry." We have seen it growing on the summits of the White Hills, and sides and peaks of other of our mountains. In the eastern section of Maine, it seems they are quite abundant, and are gathered in large quantities by the Quoddy Indians, and others, and brought into the market. They are a smaller berry than the lowland cranberry, but of a pleasant, acid flavor, and by some preferred to the others. We think this variety deserving some trials of culture as well as the other, and we also think success would follow the trial.—*Maine Farmer.*

Beautiful Thoughts.—Among some of the South Sea Islanders the compound word for hope is beautifully expressive. It is manolana, or the *swimming thought*—faith floating and keeping the head aloft above water, when all the waves and billows are going over one—a strikingly beautiful definition of Hope, worthy to be set down along with the answer which a deaf and dumb person wrote with his pencil, in reply to the question, "What was his idea of forgiveness?" "It is the odor which flowers yield when trampled on."

TO THE READERS OF THE NEW ENGLAND FARMER.

Nearly ten years have now elapsed since my introduction to you as the Agricultural Editor of these columns, and during all that time the communication between us has been harmonious and unbroken. This communication has been personal, as well as through the press, for I have from time to time visited you in every section of the State, mingled with your families, replenished my pen with your practices and their results in my favorite art, and more than one hundred times addressed you publicly in the endeavor to promote its interests.

In the progress of these events, the people of my native State have several times called me, unsolicited, to accept some public trusts. These I have accepted, and,—without forgetting the great leading objects of my life, the objects in which *you* are so directly interested,—have endeavored to discharge the duties of those trusts with promptness and fidelity.

One of the trusts thus confided to me was to act upon the Board of Trustees for the State Reform School at Westboro', an office to which no compensation is attached. I entered upon its duties in June, 1856. The law requires that I should visit the Institution *eight* times each year. The record there shows that I *have* visited it *twenty-five* times each year, and the *same record* proves that once in each quarter I have made a *private* and *thorough examination* of every department of the Institution, and that a report of each of those examinations has been *carefully considered* by the full Board, and its suggestions or recommendations adopted or rejected, as they commended themselves to the judgment of the Board. What *I* have done, each of the other Trustees has also done, with scrupulous fidelity.

On the 21st of July, three members of the Governor's Council, namely,

ELIPHALET TRASK, of Springfield,
J. M. CHURCHILL, of Milton,
JACOB SLEEPER, of Boston,

made a short visit to the Institution; they had been there previously on the 6th of July, and then ascertained that three boys were confined in some wooden lodges, and this second visit was to investigate the causes and nature of that confinement. I will not occupy space in giving their description of those lodges, or of the alleged treatment of the boys, for they have been laid before you in the papers of the day, as well as in the news department of the *Farmer*. The refutation by the Trustees, of the Committee's charges, has also been laid before you in the public papers, and it is not necessary for me to dwell upon them here.

I have mingled pretty freely with the world through a period of half a century, and for two thirds of that time have been actively engaged in its business and cares, both of a private and public character, and in all my experience, I have never met a company of men that were, in my judgment, so assiduously and conscientiously devoted to any public trust, as the Board of Trustees of the State Reform School at Westboro'. And *the School to-day, in all its Departments, under an impartial investigation, will testify to this devotion!*

One or two charges made by the Committee, and not alluded to by the Trustees, in their statement, I will briefly notice. It is to be inferred from the language of the Committee, that the Superintendent was guilty of gross misconduct in employing one of the boys to report the language and conduct of others. With regard to this, I will say, that such service is usually voluntary on the part of the boys, and at any rate, is only resorted to in cases of considerable danger to person and property. *It forms no part of the system of government of the Institution.*

Complaint is made that "no *record* is kept of the causes or extent of punishment in the Institution." The truth is, there has been so little in the nature of punishment inflicted, that it had not occurred to the Trustees that a record was necessary. By referring to the report of one of my private examinations previous to the fire, I find that, although there were more than six hundred boys in the School, there was *not one in the correctional department*, and that it had been *entirely unoccupied for three months* in succession! In the early days of the Institution it was the practice to inflict corporeal punishment, but that practice was abandoned by the present Board, and has only been resorted to in a few instances of the most flagrant misconduct. My preference has been to deprive the rebellious of their personal liberty, to feed them on a plentiful and wholesome, but light diet, and "keep the door of mercy open to them," and by that earnest persuasion, evidence of which is contained in Rev. Mr. Himes' letter, to induce them to return to duty. But as the committee are horrified by this mode of punishment, and have suggested no other, it is a fair inference that it would be more agreeable to them to let the boys run riot, trample upon the rules *sanctioned and required to be enforced* by the Governor and Council, until all government was lost and the School broken down and ruined by its own internal dissensions.

I beg my friends to look, for a moment, at the very uncourteous attitude, (to use the mildest term that will apply,) in which this committee has placed itself. They went to the Institution without giving notice to the Trustees, and there examined six of the most criminal boys, took their

testimony,—the testimony of persons of whom society had purged itself, be it remembered,—and gave it full credence against the Trustees and Superintendent of the Institution! The crimes of these boys—rather men?—have been related in the defence.

Now, let us see who these Trustees and Superintendent are, whose reputation is left at the mercy of six criminals, *and without an opportunity either to examine or rebut their testimony!*

Parley Hammond, of Worcester, is the senior member on the Board. He has long been the cashier of a bank, is the Treasurer of the Institution, both on the part of the Government and the Board, and sustains a high reputation wherever he is known.

Simon Brown, of Concord.

Thomas A. Greene, of New Bedford, long a successful and distinguished Teacher, a worthy member of the Society of Friends, a gentleman of intelligence and practical wisdom, whose name is synonymous with benevolence and love, and who has been on the Board of Trustees from the foundation of the Institution.

Josiah H. Temple, of Framingham, a Clergyman, in good standing, and a thorough scholar.

Henry W. Cushman, of Bernardston, a Farmer, the President of a Bank, and who is doing more than most men in the State to educate its youth. His reputation needs no exposition from my pen.

Judson S. Brown, of Fitchburg, a Manufacturer, a sincere and earnest Reformer,—willing to devote his time and talents to the cause of humanity,—an upright Christian gentleman.

Theodore Lyman, of Brookline, a son of the Founder of the Institution, who, with his ample fortune, is devoting his time, and his rare powers of mind, to works of benevolence, and the diffusion of useful knowledge among men.

Five of these persons have been members of the popular branch of the Government, and two of them have been elected by the free suffrages of the people as Lieutenant-Governors, and had an honorable seat in the Council Chamber.

Having enjoyed these privileges, it will be presumed by the good people of the Commonwealth, that they ought to know something of the usages of the Council. They do know, that the following were, if they are not now, rules of that dignified body:

1. That when a man is accused, their knowledge of the accusation should *be held sacred and inviolate* until he could be heard in his own defence, and that any infraction of this rule was a gross breach of privilege.

2. That not only private "leakages" were reprehensible, retailed in a small way, but that all information imparted to publishers, whereby a partial and imperfect knowledge of the transactions of the Chamber should be made public, was a gross violation of justice and decency, as well as a violation of privilege.

3. That all *memorials*, petitions, and papers of every description, that related to public affairs, and that were respectful in their terms, should receive the careful and impartial consideration of the Chamber.

I will not enlarge upon this point, but leave it to you to say, whether you have not seen paragraphs in the public prints, relating to public affairs, pregnant with "mischief a-foot," when nothing had appeared *as official* from the Council Chamber. A proper sense of justice, nay, of common fairness, ought to have impelled the Council to present their charges to the Trustees, in the first place, and to have allowed their explanations and extenuating circumstances, if there were any, to have had their proper weight. If, *then*, the Trustees had continued their alleged "cruel and barbarous" Duke of Alvaisms* upon the boys, they should have removed the whole Board, and *then,—and not until then,*—justified their acts by a publication of the facts in the case. The public had no right to these facts before, and if this publicity was made through ignorance, it was a "*blunder*," which has been said to be "worse" in a high public functionary, "than a crime," for the Council "were bound to know what they ought to know." It was ten times a *blunder*, on the eve of one of the most important elections we have ever had! Can this furnish the reason why, after the report had been "*unanimously accepted*," no action was taken to remove these guilty officers, and that the Institution was suffered to proceed under the alleged horrible "cruelties" practiced in it? Does not this furnish the highest evidence that the authors of this report *had no confidence in it themselves?*

The Institution is a noble one, and is doing a noble work,—more, by far, than its most sanguine friends ever expected of it. But it has its imperfections, and these are organic, not administrative, and they have been repeatedly pointed out to the Legislature in the annual reports of the Trustees. It is governed in the principles of parental love, of kindness and personal attention to its inmates. It is governed by *a rigid* system, but a humane one. There is no looseness or guess-work about it, and harmony of feeling and action abound within its walls,—but, in the language of its munificent Founder, "the institution

* The Duke of Alva was a General of Philip II., of Spain, and his historian says of him: "The world has agreed that such an amount of stealth and ferocity, of patient vindictiveness and universal bloodthirstiness, were never found in a savage beast of the forest, and but rarely in a human bosom."—*See Motley's Dutch Republic.*

should be considered a place of *punishment* as well as a place for reform. It will otherwise do little good." If it were judged by the infallible test of Holy Writ, that, "*By their fruits ye shall know them*," it would wring the meed of praise from its boldest detractors. At the dedication of this Institution, Horace Mann said, that "if it should be the means of saving a *single* boy, it would repay the people of the Commonwealth for all their care and outlay." On coming out, some one asked Mr. Mann whether he did not overdo the matter a little, and if he really meant that saving one child would be a sufficient remuneration. "If it were MY boy, I should think it would," was the quick reply.

Now, let us see what the institution *has* done. In the estimation of Mr. Mann, if but *one* boy is saved, all the cost and care is well expended—but I can show you by irrefragable evidence, that EIGHTY-THREE out of every one hundred of the boys subjected to the discipline of the Institution *have been saved!* And while this noble result has been secured, it has been done at a less expense, with a single exception, than by any other similar institution in the country.

I have been constrained to make these statements to my readers that my good name might not suffer in their estimation by the aspersions of the committee,—for, as one of the Trustees, I feel "bound to know what I ought to know," and will not shift upon the Superintendent blame for wrongs imputed to him for official acts which I have authorized. I have been cognizant of his management as Superintendent, and believe it has uniformly been judicious and merciful, and that he has always treated the boys in a fair and honorable manner, and in a truly Christian spirit. I also believe that any investigation by an impartial tribunal, however searching it may be, will prove the *charges of the committee unfounded.* Such investigation I invite, as a member of a branch of the State Government, which, if not co-ordinate with that of the Council, is entitled to fairness and respect. I have acted under a constant sense, that

> "He serves best the Father, who most serves man,
> And he who wrongs *humanity*, wrongs Heaven."

Before closing, I desire to say, to each one of you who is in the habit of reading these columns, and under a deep sense of accountability to my final Judge, that, in my belief, there is No *just cause, whatever, for a charge of cruelty against the Superintendent, or of any neglect of duty in the Trustees.* What the *motive* is for such accusations, is not *entirely* clear. This is not the first attack, from high places, upon an institution that reflects credit upon the State, and upon humanity,—and these attacks have prejudiced the public mind, and embarrassed and injured the discipline and prosperity of the Institution more than did the calamitous fire which occurred about a year ago. But, whatever the motive may have been, it seems clear to me, that the Committee, although emanating from the Council Chamber, *became the complete dupes* of several shrewd, but wicked and designing boys, and had not sufficient penetration to discover it.

Finally, how are we to stand before the world, as a State, and especially before our Southern brethren, with an institution in our midst, charged with "cruelties" and "barbarities" akin to the inhuman atrocities of the Duke of Alva, as described by Motley, who sent his victims to the executioners by scores, and who was the terror and scourge of an unoffending and unprotected people? This is the execrable wretch, fiend, the incarnation of all human wickedness and depravity, who affords the committee of the Council a parallel for the conduct of some of the officers of the State government! The newspapers stated that the report of the Committee was *accepted* by the Council. That term does not always mean that a measure is *adopted.* But whoever *sanctioned* the report, is equally guilty with its perpetrators.

These charges are not only grave in themselves, but they derive important weight in the source from which they come. If they were the hasty assertions of some disappointed politician, or the gloomy lucubrations of some editor, out of office, they would become the wonder of a day, and leave no taint behind. But such is not the fact. They have proceeded *from the Government of the State—from the fountain of Mercy and of Justice,* where we are taught that the balances hang even, and resentments never come! The victim of this power is *principally* a humble individual, and he stands before it appalled with its injustice, battered, and broken, and helpless in the impending ruin which surrounds him. Nothing now can save him but the PUBLIC VOICE, and to that *Voice* I confidently appeal for him and for myself.

SIMON BROWN.

SECRET OF SPEED IN THE HORSE.—One great secret of the speed of "Flora Temple" has been discovered. It has been found by measurement, that her stride—small as the animal herself is—is equal to that of a sixteen-hand horse. She wins by her long, low, locomotive style of going, which works with the saving exactitude of machinery, and wastes no power in unnecessary action, or in what is graphically termed "style."

THE HORTICULTURIST, for August, is filled with capital articles, is handsomely embellished, and is well sustained by the new Editor, PETER B. MEAD, Esq., aided by the skilful and honorable publishers, Messrs. SAXTON & BARKER, 25 Park Row, N. Y.

For the New England Farmer.

FARM FENCES---No. 3.

Mr. Editor:—In a former communication I mentioned that I might say something about the relative cost of fences, the quantity of land they cover, and the qualities one adapted to general use should possess. In my estimate, I do not claim perfect accuracy, as the cost of fencing will of course vary in different places, according to the price of lumber, the cost of labor, &c. These estimates will be taken in part from those made by sensible and reliable men, and for the rest I shall have to rely on my own judgment.

The average cost of the ordinary post and board or post and rail fence is said to be about 80 cents per rod, and the average duration of such fences not more than ten years.

The quantity of land covered by this fence will not exceed two square feet to the rod, but the plow cannot be run conveniently nearer than to within one foot of any fence, which makes a loss of two feet in width on both sides of any fence for tillage purposes.

To enclose an acre of land 20 rods in length, and 8 rods wide, would take 56 rods of fence.

56 rods of fence, at 80 cents per rod	$44,80
Value of land covered by fence, at $50 per acre	21
Loss of land for tillage purposes	2,20
Cost of fence and value of land covered by do	$45,01
Cost of fence, and value of land lost for cultivation	47,01

Average cost of wall fences $1 per rod—56 rods	$56,00
Average width of do. 3 ft., value of land covered by fence	3,17
Value of land out of reach of the plow	5,30
Cost of fence and value of land covered by same	$59,17
Cost of do. and value of land lost for cultivation	61.30

Average durability of fence 20 years.

To build the zig-zag or Virginia fence, it is estimated, will require 14 rails per rod, and that cedar or chestnut rails are worth $6 per hundred, which, with drawing and building the fence, will amount to $1 per rod.

56 rods, at $1 per rod	$56,00
Loss of land on both sides would be nearly or quite	13,00
Cost of fence and loss of land for cultivation	$69,00

Probable duration 20 years.

The cost of wire fences, as per schedule of prices of the New York Wire Railing Co., is $2,40 per rod, with posts and screws.

For a fence 7 wires high this would amount to	$134,40
Value of land out of reach of the plow	2,20
	$136,60

Here are figures which will enable any farmer to see that improvement is very much needed in this matter of fencing. The qualities a fence for general use should possess, I will venture to suggest, should be, in the first place, simplicity. Any farmer with a little experience should be able to build it. It should be cheap, in ordinary cases not costing much more than the common post and board fence, nor requiring more than 40 feet of lumber to the rod. It should be *straight*; no "wavy lines," no zig-zag fence—the most crooked thing the ingenuity of man has yet been able to invent—should be tolerated by any farmer where land and lumber are of much account, if a better fence can be had.

Farmers! just think of 14 rails to the rod, and $13 worth of land lost for cultivation, in fencing an acre of land. "Rail Splitting" is certainly an honorable occupation in some cases; but a man's energies had better be employed in something else than in building this kind of fence. It should be firm,—it should be able to withstand both winds and unruly cattle. It should keep its position on *the very worst heaving soils*, and resist ordinary currents of water. And last but not least, it should be durable. Every part of it should last at least 30 years, in ordinary cases requiring no repairs.

These are the requisites for a good farm fence, and no farmer should be satisfied with one that falls much short of them. Chas. R. Smith.

Haverhill, N. H., Aug., 1860.

FATTENING ANIMALS---STALLS AND SHEDS.

In Scotland, where everything in farming is reduced to system, several experiments have been made in order to ascertain the relative value of the two modes of fattening cattle, above named. The animals were in one instance selected and divided as near as possible in regard to weight, &c.; five of them were placed in an enclosure well sheltered, and allowed a sufficiency of room, and the other five were placed in boxes or stalls. At the commencement of October, it was ascertained that those in the sheltered enclosure eat, daily, one hundred and thirty-four pounds, while those in the boxes or stalls consumed but one hundred and twelve pounds, thus demonstrating the doctrine of Professor Liebig, that warmth is an equivalent for food.

Towards the end of April—the experiment having occupied seven months—the animals were all slaughtered, and the following results were noted down:

Cattle fed in boxes, beef, 3,462 lbs.
tallow, 376 lbs.
Cattle fed in yards, beef, 3,216 lbs.
tallow, 301 lbs.

The present is an appropriate time for the farmer to give attention to this matter, and we hope experiments similar to the above will be made, and the results made public.

How Carrots affect Horses.—The carrot is the most esteemed of all roots for its feeding qualities. When analyzed, it gives but little more solid matter than any other root, 85 per cent. being water; but its influence in the stomach upon the other articles of food is most favorable, conducing to the most perfect digestion and assimilation. The result, long known to practical men, is explained by chemists as resulting from the presence of a substance called *pectine*, which operates to coagulate or gelatinize vegetable solutions, and this favors digestion in all cattle.—Horses are especially benefited by the use of carrots. Thev should be fed to them frequently with their other food.—*American Stock Journal.*

For the New England Farmer.

DOCTORING DOMESTIC ANIMALS.

MR. EDITOR:—I have noticed in the *Farmer* that its editor, in advising for the treatment of sick animals, goes in for what I will call "The progressive treatment." We will put no "pathy" to it. This is as it should be, and in accordance with reason and common sense, as I understand the matter. Every farmer who has stock of any kind, will sometimes have them sick. Sickness and death are written on every living thing. The farmer can often save himself much trouble, and sometimes expense, by the timely use of a few simple remedies, combined with a little knowledge. A little knowledge is not always a dangerous thing. My wonder is that there are not more sick animals, when we see the shameful manner in which many persons treat their dumb beasts. As I have seen this, I have thought the beast knew the most of the two, and if let alone, would be the better off. For some years past I have paid much attention to the diseases incident to our domestic animals. The subject is somewhat a difficult one, and it is often no easy matter to make out a correct diagnosis of what the real disease is; but I have found this more particularly the case in regard to the hog; and after being satisfied on this point, it is still more difficult to administer the remedies, from his "hoggish nature and his dirty home." We must judge of the diseases of animals as we do those of children—from the history of the case, and the symptoms present. Still I have found it much easier to satisfy myself as to the diseases of cattle than hogs; however, experience and close observation will enable us to come to pretty correct conclusions.

In my treatment of sick animals, I have always acted on the principle that what would be good for man, under like circumstances, would be for the animal, and I have never had occasion to feel dissatisfied with this course. The greatest "pudding head" out thinks himself qualified to prescribe for a sick animal, judging from what I frequently see; whereas, to treat them properly, requires long and close study, combined with observation among the sick, and a correct knowledge of their anatomical structure, though this is not absolutely necessary; but the former are; and I, and every farmer should rejoice that veterinary science is taking its proper place among the professions. We need ten, where now we have one, skilled in this branch of study; and I do not doubt, if we now had them, they would find it a paying business if they were properly located about the country. Here is a fine field open to our young men, who have a taste this way; one every way worthy of the highest order of talent; Who leads?

Before closing this article, I will mention a few remedies, which every one having a cow or a horse, will do well to have always on hand; they are the leading medicines for cure in most diseases, particularly of an acute character. The really skillful physician makes but little use of the materia medica; his remedies are few, and not complicated.

First, Aconite tincture stands at the head of the list. In all cases of fever and inflammation this medicine is useful, and I have never found anything yet that would take its place. Rivers of blood have been saved to mankind by its use, and may yet be to cattle-kind. It is always safe. Dose: Put a teaspoonful of the tincture into a pint of soft pure water, and give a wineglass full once in four to eight hours; more frequently if the case is urgent.

Second, Arnica tincture must be placed in the first class of remedies; though this is better adapted to use externally than internally. In all cases of strains, injuries, bruises, soreness, lameness arising from any of the foregoing causes, and the like, there is no other thing which will compare with it. If any one doubt this, try it; that will settle the matter. It may be given internally, the same as aconite, in cases of severe injury. For external use, put three teaspoonfuls into a quart of soft water, and bathe the parts affected frequently. In the case of horses, where the legs are the part affected, I have often bandaged them, and keep wet with the medicated water, and rapidly reduced severe swellings.

Third, Bryonia tincture is another important remedy, and in connection with numbers one and two, about all that are necessary for the treatment of any acute case of disease the farmer may have to deal with among his domestic family. It may be prepared the same as number one, and given the same.

Case: Called to a fine young horse, which the night before had been driven seven miles at full speed, and left for two hours in a profuse perspiration, standing in a damp, chilly night air. The horse refused to eat, was dull, and quite stiff; his pulse quick, strong and full; skin hot and dry; would drink all the water offered him. In fact, his owner considered him a "used up horse," and he certainly appeared like one. He wanted him bled, but this I refused to do. Treatment: To be deprived of all food, except a little meal stirred into a pail of warm water. Of this he was to drink often; to be lightly covered, and well rubbed with a cloth, twice a day, and to give the aconite as above every two hours. At my next visit, the following day, the horse was every way better, and his owner thought him not quite so poor property as the day before. His breathing was more easy and free, but he had some cough; ordered the treatment continued, and to give bryonia in connection with the aconite, alternating once in four hours; without following the treatment further, suffice it to say, that in less than a week the horse was as well apparently as he ever was; not so strong, of course. I may take this subject up at a future time. Farmers, use your brains more, and save your hard-earned dollars. N. Q. T.

King Oak Hill, 1860.

REMARKS.—We hope so. This is the kind of instruction most of us need.

WHERE DO SEA-BIRDS SLAKE THEIR THIRST?—The question is often asked, where do sea-birds obtain fresh water to slake their thirst? but we have never seen it satisfactorily answered till a few days ago. An old skipper with whom we were conversing on the subject, said that he had frequently seen these birds at sea, far from any land that could furnish them with water, hovering around and under a storm cloud, clattering like ducks on a hot day at a pond, and drinking in the

drops of rain as they fell. They will smell a rain squall a hundred miles, or even further off, and scud for it with almost inconceivable swiftness. How long sea-birds can exist without water, is only a matter of conjecture, but probably their powers of enduring thirst are increased by habit, and possibly they go without for many days, if not for several weeks.—*California Spirit of the Times.*

For the New England Farmer.

THE BAROMETER.

Although one of the web-foot fraternity, yet I take a deal of pleasure, and gain considerable information in perusing your valuable paper. I have noticed lately, inquiries of the usefulness of the barometer on a farm. I am no farmer, but having been a constant observer of that instrument for fifteen years or more, I give a few remarks for those who are interested, from my own experience. Henry Ward Beecher's laudation of the instrument would lead one to suppose that with the barometer for a guide, they would know precisely when it would rain or not. My experience does not lead to such conclusions. The words on the barometer, "Set Fair." "Fair," "Stormy," &c., are no guide whatever, as the barometer, properly graded, seldom falls to "Stormy," or rises to "Set Fair;" neither does a fall in the barometer always indicate rain; or a rise, fair weather; it may be owing to a change of wind—an increasing or moderating wind—or it may be owing to a storm or changing weather going on at some distance from us, but which may pass us by without any change of weather in our immediate vicinity.

With a southerly wind and a low barometer, we often hear people say, "How heavy the air is," because it causes depressed feelings; but the cause is, the *lightness* of the air, with which the barometer (showing the specific gravity) stands lower than with a northerly and bracing air, in which it is really *heaviest*, causing the mercury to rise.

With a "north-west wind," a falling barometer generally indicates a change to south-west; with a rising barometer, it indicates a change to north-east: with which wind, in fine weather, the barometer stands highest; and a falling barometer with the wind north-east, indicates a change to the south, or rain. With a south wind, a falling barometer indicates, sometimes. more wind, or rain; and it seldom rises before a change to the west ward, or north-west. But these rules are by no means invariable, and the barometer can only be depended on as an aid to form a judgment of what the weather may be, by those who have studied its variations for at least one year; and then they may very often be mistaken. As an aid, it has been very valuable to me as a shipmaster; but to a farmer who is inexperienced in its use, I think an investment in hay caps would pay much better; in fact, I have been deceived so often by its apparent indications, that I am almost tempted to say I never would use one again—but as it has been the means of saving many sails and spars, perhaps life, I still advocate its use by shipmasters.

I have known many heavy squalls and showers to pass unnoticed by the barometer. On one occasion I experienced quite a severe gale, and rain storm from the north-east, with a high and continually rising barometer. This was in the vicinity of New York. The farther from the equator, the more the weather affects the barometer; and a south wind in south latitude has the same effects on it as a north wind in north latitude. There are many kinds of barometers, from the costly mercurial to the cedar and pine wood ones by the Mexicans, or a cracked bone of the human system. I heard of a captain who said he could tell by the skull of his second mate, (which had been fractured) when a storm was approaching, better than by any barometer. My experience has been with the mercurial and aneroid barometers; generally considered the best. Hoping to see an account of some of the new kinds, and their usefulness, by those who have used them, I remain, yours, JACK CROSSTREES.

Boston, August 16, 1860.

REMARKS.—Thank you, Captain Jack, you are the very man to tell us about the barometer. In an easy chair and slippers, how we should like to hear some of your ocean "yarns" in connection with that instrument. Please write again.

For the New England Farmer.

FLOWERS.

MR. EDITOR:—Having noticed in your issue of July 14 the inquiry of Mary as to the varieties of flowers best adapted to our New England seasons, I offer for her benefit, as I hope, some of my experience in that line.

To select from among many things that I have for some time proved, as well as from more recent acquisitions, those which endure without any especial care the cold of our winters, would dispense with many which must ever be favorites with the lover of flowers, and yet embrace very many of our choicest varieties.

Of the earlier blooming plants, the Narcissus and Tulip must ever prove desirable, both of which I have in their perfection, without trouble, the first white, and very fragrant; the last red, yellow and variegated.

Nearly or quite at the same time I have the Iris, white and yellow, the Ragged Robin, rose colored, Dwarf Phlox and Pæonies, of which there are many varieties; those, however, which I have cultivated longest, and prize very highly, being white, pink, rose-scented and single.

For hardy vines I have the Clematis or Mountain Fringe, Trumpet Honeysuckle, (monthly,) and Calistegia, this last bearing double, rose-colored flowers about the size of a damask rose, and continuing in bloom until severe frosts take from our gardens all that makes them beautiful.

Of Roses, some dozen of the choicer varieties should by all means be included. Of Lilies, orange, straw-colored and white. This last is more nearly allied to those requiring protection during winter than any other here mentioned, but so exquisitely beautiful and so fragrant, that for all care needed the grower will be most amply repaid.

The Wax Flower, white, though grown by me this season for the first time, will I presume, from its appearance, prove hardy. The Canterbury Bells, when grown in all shades, from white to

dark blue, are most beautiful. The double Hollyhock, especially the rose-colored, is really deserving of mention.

Again, for variety, we have Monkshood, blue, Barometer, blue, White Immortal, and Fall Phlox, with Pinks of various kinds, including the Picolee, a fine bedder.

Last, but by no means least, the Pansies, which are often in bloom before snow leaves the ground in spring, and after it has fallen in autumn or early winter, should it partially thaw, I having picked them as late as December. Of these we have an almost endless variety, than which perhaps nothing we have is more frequently admired.

I have thus hastily given the names of something like the number mentioned, of biennials and perennials as specified. Annuals I will not now refer to, except to say that for late blooming there are many most desirable and quite hardy, of which should it be desired, I will speak at some future time.

If "Mary," or any of your readers, should wish to obtain any of these, or other plants or seeds, and will give me their address, I can, perhaps, help them to obtain whatever they wish, at considerable less than usual prices, and offer some suggestions that may prove useful to inexperienced florists, should they be thus. A letter directed to Box 23, Richmond, Mass., care of the postmaster, will reach one who for the present will be known only as LOUIE.

Aug. 14, 1860.

For the New England Farmer.

BEST PREPARATION FOR THE MANURING OF DWARF PEAR TREES.

MY DEAR SIR:—A correspondent in your paper of the 11th inst. inquires for "the best preparation sold for the manuring of dwarf pears, peaches," &c., making a very difficult question for any one to answer to his advantage, unless they have more knowledge of his soil than he has seen fit to communicate. For instance, it cannot be supposed that the same "preparation" would show equal benefits on a sandy or gravelly soil, that it would on a loamy one, or that the applications to a loam would produce the same effect, and to the same extent, that it would on a stiff clay.

In materia medica, it is an established fact, that the same remedy will not apply to all diseases. It is no less true that in the same disease, when the type varies, the prescription must vary to meet it. So the constitutional temperaments and habits of men vary, and the medicines that may be salutary to one, may be death to another. There are considerations without number to be regarded in the healing art, and minutia there, are worthy of close attention.

Climate, like constitutional temperament, has close connection with individual health and comfort, so that not only a change of food is often found necessary to the success of the individual who travels, but it must have a different preparation in widely different localities. If the Esquimaux should change his living to that of tropical fruits, it would probably be fatal to him at once. Let him change his residence for one in the burning zone, and live as the natives live there, and a more speedy fate would overtake him. The air and his diet would both be averse to his organs of respiration and digestion, which have grown and matured for a more bracing air and less rapid digestive powers, so that stronger food is necessary to meet his demands.

The native of mountainous regions, where the air is always fresh and the water gurgling from the rock always pure, in the valley finds a want of those elements so sustaining to physical vigor. The damp fogs engendered with miasma from stagnant or sluggish waters, prey upon his vitals, while those who have inhaled them through life, scarcely feel their influence. His constitution is not adapted to the atmosphere, and it becomes ruinous to life and health.

Vegetables, trees and plants, like men and animals, have constitutions and physical adaptations to certain circumstances. The rush that luxuriates in mire, will not grow on the dry soil of the hill-side. The oak that assumes a giant's form among trees on the mountain, would pine and die in the low morass or shaking quagmire.

To cultivate his fruit trees, then, your correspondent has only to find what they lack in climate and constituents of the soil. And first, the soil itself.

Once, and for many long, beautiful years, our New England soil was well adapted to fruit growing, as the old orchards, now going into the decay of age, so faithfully testify. But two hundred years of exhausting culture has impoverished this soil. Why should it not? What acre of tilled land has not had many times in value in produce carried away from it and sold? How little of the price of these crops has been returned to the land to renumerate for the exhaustion it has suffered? Man who plowed and sowed, and gathered into the garner, has been too careful to absorb all the profits in payment for his labor, while poor mother earth, compelled to toil on to gratify his pride, has been stinted, year after year, in her daily food. It is in no way strange, that with such management, the strength and beauty of youth have fled from her countenance, that toil-worn and weary, she has become hard and unyielding, that the very pores of her surface are clogged, so that the surplus moisture cannot be thrown off, only as the slow process of evaporation absorbs. In a word, the soil of New England has, to an alarming extent, been roughly, shamefully managed, and the first and best preparation to be sold for manuring it for fruit trees, that we have ever tried, or can recommend, is steel,—well tempered, sharp, polished steel. Our mode of application would be to put the point of this steel, down into the earth so low and so sure as to open water courses sufficient to take off all superfluous moisture. This done, we would give it another application, and that would be to probe the whole surface to be set to trees to such a depth as to loosen the earth eight, ten or twelve inches deeper than any plow has ever penetrated. No matter if it is hard pan or clay, even. Bring up and expose it to the atmosphere, and if the land is well drained, it will make a good, friable soil, one that trees or any other plants will delight to throw their roots abroad in.

We have no doubt that many of the failures in fruit tree culture at the present time, arise from neglecting a proper preparation of the soil by thorough drainage and deep pulverization, and

we fully believe that a few trees well set, where these particulars are regarded, will, all expense counted, yield a quicker and larger profit than the many set out, without.

Manures for fruit trees.—In a climate like ours, whose summers are short, and whose winters are subject to great and often rapid changes of temperature, it is an object to secure a healthy growth of well-matured wood, rather than a rapid and spongy one. Consequently, heating, or very exciting manures are as likely to do injury as benefit. The very best we have ever tried, was a compost with muck for its basis, with lime or ashes as neutralizers. If leaves, bones or soil, or even a moderate quantity of yard manure, is mixed with these, it will increase the quantity and may, perhaps, improve the quality somewhat. But where only one material is to be had, I prefer the muck in preference to yard manure. It contains more of the elements of vegetable growth, and is less liable to collect and harbor insects injurious to the tree. It does not give off its food so rapidly as animal manure, but continues its effect for a longer period. And what makes it still more attractive, it is cheap, costing most farmers only the digging and preparation, and may be fed to the orchard in any quantity without impoverishing the grain field. WILLIAM BACON.

Richmond, August, 1860.

For the New England Farmer.

BUTTERNUT TREES.

A lady recently informed me, that the above tree was injurious to fruit and vegetables in its vicinity, and consequently unfit for a garden.

I do not remember having ever heard or seen any statement of this kind before, and having a young tree at the bottom of my own garden, have examined carefully its surroundings. I find an asparagus bed near by has only one or two stalks within about three feet of it, although the bed was made originally within about six inches of where the tree was since planted. From this it would seem that asparagus is one of the things injuriously affected. On the other hand, rhubarb plants, on the other side, appear to thrive, though mine have not been prolific, and the stems have been small. This, however, might have been caused by want of manure. There has been no appearance of blight.

A large purple plum tree, about ten feet distant, bears profusely, and nothing else appears to suffer. The butternut has not yet borne fruit.

If it is a fact this tree is injurious to vegetation it seems desirable that the fact should be known. Can you inform us?

Will asparagus beds made in the fall, be as likely to do well as those made in the spring, if well protected from cold? L. T. S.

Brookline, August, 1860.

REMARKS.—We have had no experience with the butternut tree, and hope those who have will respond.

In regard to the rhubarb roots, we cannot see why they should not do as well set in the autumn and properly protected, as the apple tree, or any of the plants which are set in the fall.

For the New England Farmer.

THOUGHTS SUGGESTED BY AUGUST NO. OF N. E. FARMER.

Page 345.—*Calendar for August, (Labor and Leisure.)*—In this article we have some noteworthy observations upon *Labor and Leisure*, intended to counteract the too common and vastly pernicious error that the former of these is a curse, a painful infliction, a hardship and a necessity to be avoided and evaded as much as possible, while the latter is a thing to be desired, courted, and secured as much as it possibly can be. This is truly a most egregious and pernicious error, and so widely prevalent, and productive of evil in so many forms, as to make every effort to expose, eradicate and neutralize it a most commendable one. There are, doubtless, not a few who pass, with themselves and with the world, for good citizens and well-meaning members of society, who harbor this error in their own minds, and by their example and conversation countenance it in others, but would give it countenance no longer, if its mischief-working tendencies and results were once vividly and persuasively presented to their minds. Let it be considered, then, that *crime* in all its manifold forms, and *criminals* of all kinds, the pests and nuisances of society—are the legitimate offspring of this prevalent and pernicious error. For what is the *root* of crime? Is it not obviously, the desire or disposition to supply one's wants by fraud or force, by begging, borrowing or stealing, or by some similar methods, all of which are made by this delusive error to appear *easier* than the Providence-appointed way of supplying each one his own wants by his own labor, or by a fair and equitable exchange? Let this fact, then, be *duly* considered, that nearly all the crimes by which society is infested and injured are the fruits of this wrong idea as to labor, and who, but the laziest of the lazy, will any longer tolerate or harbor this dread of work, this monstrous error which is productive of such results!

Let the reader of these "Thoughts suggested," turn to the article under notice, and re-peruse those paragraphs of it which relate to *Labor and Leisure*, for they well deserve serious consideration by every one who has any regard,—even were it but a spark—for the welfare of man and the interests of society. Every such person will be persuaded, after reading and duly pondering the remarks referred to, that the law of labor is a *wise and beneficent* one; that work is the well-spring of a thousand streams of manifold benefit and blessing, as well as the preventive of the vice and wretchedness which flow almost universally from indolence and idleness;—that few are fitted to make a good use of leisure or exemption from the necessity of labor;—and that active employment, especially for high and noble ends, is the best state for man or woman in the present world. Those who endeavor to plant such convictions in the public mind are laboring for an excellent end; and when such convictions shall have become so common as to form an influential portion of public opinion, then will the lazy, the idle, the unproductive and all those who evade work, be judged and dealt with very differently from the way they are thought of and dealt with now. *Now*, those who are too proud or too lazy to work, are too generally held in honor. *Then*, they will be considered the

worst enemies of the interests and welfare of society, as they countenance and practice upon the very disposition which we have shown to be the root of all crime—the disposition to supply their wants from the products of the labors of others. The idler is not very distantly related to the criminal.

But the practical importance of the theme in hand, and of the reform needed in public sentiment as to labor, is leading us to extend our remarks perhaps to an undue length. We close by thanking the editor for those words of his which have suggested these thoughts, and by saying that honor and praise is due to all those who make similar efforts to correct the errors which do generally prevail as to the desirableness of exemption from labor.

Page 347.—*Culture of Tobacco.*—A very sensible talk upon the subject. Those who follow the directions here given will be sure to obtain a very excellent crop!

Page 349.—*Sweeney in Horses.*—A long rest in the pasture is a good remedy—often the very best—not only in this disease, but in several other of the diseases and lamenesses of horses.

Page 355.—*Honey Blade—Hungarian Grass.*—Two things are settled about this much puffed crop: 1, That the yield obtained by the editor,—about one ton per acre—is much nearer to the amount *usually* obtained than the large yields reported by those who have seed to sell at extravagant prices; and 2, That all the fine or fraudulent names which have been, or can be, invented for this plant, will never avail to make it anything else than a species, or variety rather, of millet. One thing more, I regard as settled and sure, viz., that the getter up of the pamphlet referred to is an arrant ———.

Page 360.—*How Farming was made Pleasant and Profitable.*—Undoubtedly agricultural books and papers in a house, a piece of ground for the boys to cultivate, with a share in its proceeds, will prove very effectual as an agricultural education, perhaps more so than studying botany and agricultural chemistry in schools or colleges; still the latter must help to make better farmers in 50 or 75 out of every 100 of such pupils, and though the former may be better than the latter, yet *both* are better than either alone, and better than even the best of the two. Let parents and the State authorities govern themselves accordingly.

Page 363.—*Plum Culture.*—There is much ingenuity and good sense manifested in the directions here given, and those who follow them, will be pretty sure to succeed.

Page 365.—*Superphosphate for Turnips.*—Before purchasing any superphosphate, farmers would consult their interest if they would procure and read a report on some of these articles by Prof. S. W. Johnson, Chemist to the State Agricultural Society of Connecticut.

Page 370.—*Uses and Value of Muck.*—Whoever may adopt the hints given in this article will have good cause after a year or two to thank the writer, and to esteem the *N. E. Farmer* as a valuable visitor and fireside instructor.

MORE ANON.

SEEDS AND CUTTINGS FROM SYRIA.—Ninety-four boxes and two barrels, containing a fine assortment of seeds and cuttings, have been received at the Patent Office from Syria. The assortment is composed of varieties of wheat, barley, grape-cuttings, olives, scions of fruits and vegetable products. The cuttings, scions, &c., will be sent to the new propagating houses for experiment and increase, and no distribution will be made of the remainder until fall. Among the interesting plants may be mentioned the Lessaban. It makes an excellent article for hedges, and as a tree it is very ornamental. There are also seeds of melon, squashes, &c., camel's food, dates, walnuts, equal to the English, and probably well adapted to the Middle and Southern States. The mais tree is esteemed as medicinal, or rather prophylactic. The seeds sent were procured from the tree growing within the enclosure of the ancient temple of Solomon. It was not to be expected that all these articles would arrive in good condition. The length of the voyage at this season, with other circumstances, have caused the loss or death of a large proportion of them. But enough are left to yield a rich return for the moderate sum (one thousand dollars) invested in their purchase.—*Baltimore Sun.*

PLANT-FOOD AT THE SURFACE OF THE SOIL.

We are continually asked by correspondents whether manures should be plowed deeply under, or placed at the immediate surface. It is difficult to answer questions of so abstract a kind; if soils are underdrained and subsoil plowed, so that in all their parts they contain at all times the exact amount of humidity which would cover their particles, then a very large class of fertilizing materials may be placed at or near the surface. Those which are not volatile in their nature may indeed be used as top-dressings with full effect, for the dews and rains will gradually carry them into the soil, and in their passage downward they will undergo a greater amount of subdivision than if buried far beneath the surface; while in their descent will come in contact with, and so feed a greater number of roots. If of a soluble character, they will be carried on the surface of particles by moistures, from particle to particle, thus imbuing all surfaces, and disseminating themselves so as to do the greatest amount of immediate good to roots of growing plants. Not only will their efforts be thus rendered greater, but in their chemical effects upon the organic matter in the upper soil, new compounds will be formed required as plant-food, before their descent where the inorganic portion requires their assistance. Indeed, those proximates formed at the surface, and soluble in their character, being carried into the subsoil, deepen the available amount of fertile earth. None need fear that any material of value will sink below the depth to which the soil has been disturbed by the subsoil plow, for nature's laws prevent any such descent. The fact that pure water is to be found in wells, fully explains the fact that soluble matters cannot leach downward to any greater depth than that to which the soil has been disturbed, and that a greater depth of disturbance in the soil is called for, is proved by every post-hole from which the post of an old fence has been removed, for there the tuft of grass is always the tallest.

Lime, if used, should always be put on the sur-

face, and never be plowed under, for the form of its ultimate particle is such that rains and dews are sure to carry it downward between the particles of soil; and in over-limed soils, in which ditches have been dug, lime is always found resident upon the surface of the subsoil, and therefore, as during its descent its chemical action can only occur on particles through which it descends, the effect must be greater than if plowed under, for then the portion above it could not be affected by the lime.

Wood ashes should always be plowed in at the surface, for then the gradual leaching downward of the potash will be brought in contact with all the materials which can be decomposed, or altered in their condition, by its presence.

In the use of superphosphate of lime, it requires to be entered in the soil only so far as will cause it to come in contact with humid portions, so that its slowly soluble character can develop itself, and cause its downward travel to bring about all the chemical changes of which it is capable, and at the same time, present the requisite pabulum to roots.

We have made some curious experiments, that go to suggest the fact that phosphorus is the true chemical light of the soil. We all know that a plant grown in the dark has no color. The leaves and flowers are white, and when the soil is fully charged with soluble phosphates then this difficulty, in degree, is remedied, for the leaves are green and the flowers are varied and intense in their hues.

With barn-yard manure, and particularly in soils which have been before thoroughly disturbed, we highly approve of the plowing them deeply under, for then the volatile portions, while rising in the gaseous form after decomposition, will be absorbed by the soil, instead of being lost in the atmosphere, while the straw, litter, etc., will tend to loosen the subsoil, and leave passages through which the air may enter. And this *œration* of the soil may represent, in degree, the benefits of under-draining and subsoil plowing.

This phenomenon may be observed in the travel of insects in the soil. Thus the seventeen-year locust, which in some localities has already appeared above the surface, presents holes to the depth of four feet through which it has risen, each one of which should chide every farmer who has neither under-drained nor subsoil plowed his land. It seems to be a wise provision of nature to do for the lazy agriculturist what he has failed to do for himself.—*Ed. of Working Farmer.*

For the New England Farmer.

REARING AND FATTENING OF SWINE.

Gluttons and dyspeptics have always been instructed by intelligent physicians to eat slowly, and masticate the food well, and thoroughly incorporate the same with the saliva, to secure good digestion and a uniform appetite.

The rule holds good with hogs and should be early taught and enforced, both for the advantage of the pig, and his owner. Everybody knows that a pig cloyed in early youth with strong food, greedily eaten, becomes a dyspeptic, and never does well after. Now, say to your pig, "learn to eat slow, and all other graces will follow in their proper places." Perhaps many good farmers may say "it can't be done." Nothing easier. Give the weaned pig at 6 or 8 weeks old, in a clean trough, half a teacup of dry shorts or bran, and after his dry food is all eaten, give his drink, and increase the dry shorts according to the age and appetite till 3 months old, then add one-half Indian meal for two months, and then dry Indian meal till fattened sufficiently. I have followed this plan for five years past with success. I have 2 pigs now 5 months old that are fed one quart Indian meal each, three times a day, which takes half an hour to moisten and swallow, and this quantity, with the slops and dish-water, (all of which they take after their meal,) will carry them to 200, dressed, at 6½ months old. At one year old the same breed weigh 400. One at 9 months weighed 375. I have a sow that has brought me 126 pigs, and will have another litter in September.

L. Long.

Holyoke, Mass., 1860.

EXTRACTS AND REPLIES.

UNKNOWN INSECTS.

I enclose a few insects now common with me. A fortnight ago I saw the first of them. They then were wingless—a few of them showing wings just starting. Now they are to be found upon apple, ash and maple trees alone. Three days ago I caught a few, winged and wingless—to-day they are all winged.

I have looked over "Fitch on Insects," but find nothing answering to their description, nor do I recollect reading of anything like them in "Kirby."

You may know of them, and they may be very common; if so, I shall get laughed at for my ignorance.

S. A. Nelson.

Georgetown, Mass., Aug. 18, 1860.

Remarks.—These insects were about last year, but seem to have greatly increased this. When quite young they cluster together on the stem of the tree, and upon touching them suddenly diverge in every direction, like the rays of a star. We know not what they are, or what they are to make. Before the decease of the lamented Dr. Harris, of Cambridge, we had a person to whom we could send samples of strange insects and find out their names, habits, &c., but now we know of no one near us who will furnish that much needed information. We thank you (not laugh) for bringing these insects to notice. Quite likely now some one will tell us all about them.

ALKALINE COMPOSTS.

In reading your interesting articles on "Composts and Manures," I have not seen any reference to alkalies. I have a lot of pearlash which I want to convert into the most profitable fertilizer. I thought to compost it with a very fine meadow muck which I have. Will you be kind enough to give me some information on the subject, through the *Farmer?*

Addison, Me., Aug., 1860. John Plummer.

Remarks.—We regard *pearlash* as one of the best specific fertilizers, to mingle with muck or loam. Several years ago, we were engaged in a series of experiments in which most of the special fertilizers were tested, such as guano, superphosphate of lime, ground bones, poudrette, salt, &c. Added to these was a cask of potash, containing 700 or 800 pounds. This we dissolved and sprinkled upon beds of old, finely-pulverized muck, and an equal money value of it was applied to the same space of land as was applied in the other fertilizers, and the results were favorable, when compared with the other tests.

FINE SAMPLES OF FRUITS.

Having my attention called to the article of "E. C. P." in regard to the plum, curculio, &c., I agree with him that we may yet enjoy the luxury of the plum, but we must suffer the ravages of the curculio among our other fruits as well as the plum. When I first commenced raising the plum, about fifteen years ago, I was not troubled at all with that little enemy, but in a few years they began their depredations, increasing yearly. At that time there was no black wart on my trees, but as soon as the curculio had become very numerous the wart appeared also, which led me to the conclusion that it was caused by the same insect puncturing the wood, as well as the plum. Then this little pest confined himself altogether to the plum tree or its kindred fruits, but now, after becoming legions in number, their appetites have sharpened, and they readily lay hold of apples and pears, and almost all kinds of fruits that adorn our gardens. Some of my pears this season were nearly covered with the crescent figure of this hard shelled bug but, fortunately, the progress of incubation does not prosper in the pear, although where they are badly bit it makes the fruit stunted and inferior. When there is a great blossom and setting of fruit, like the present season, there will be enough escape, but when the reverse, the fruit will be mostly affected. Hence we see the reason of the plum, in some degree, escaping this year. I send you a sprig of my plums, and some specimens of early apples.

I send the William's Favorite, Early Harvest and Early Rose and one for which I have no name. Also, a sprig of plums, a fair specimen of the whole tree. Some of my plum trees fail, or but few.

I wish to inquire when is the best time to cut in pear trees and peach trees. PETER WAIT.

REMARKS.—Thank you, friend Wait, for the specimens of fruit sent. Pomona must be smiling upon you this year.

We should think that after the leaves fall would be a proper time to head in peach or pear trees.

ENTOMOLOGY—THE CROPS.

The old adage says "make hay while the sun shines," but as it is the first real rainy day we farmers' boys have had for some time, I will improve it by asking you through the *Farmer*, how a farmer's boy could obtain some knowledge of entomology. Could I do it without a teacher? What books would be necessary, and their cost? While haying, I have noticed the great number of different insects, and thought I should like to know more about them. We are having a fine rain now. Haying is closing up, and there will be about two-thirds of a crop. Grain of all kinds promises an abundant harvest. Corn will be good if there are no early frosts. Fruit will be much more plenty than it was last year. SAM.

Enfield, N. H., Aug., 1860.

REMARKS.—Certainly, you can obtain a pretty good knowledge of entomology, or almost any other branch of learning, without a teacher. Take any of the common works on insects and read them well,—such as Kirby and Spence, Harris or Fitch, and long before you will get through with them you will learn the different orders, and the reason why they bear their different names. When you have done this, you will have learned what other steps are necessary in order to pursue the subject more thoroughly.

CROPS IN VERMONT.

In this section of Vermont we are going through such an ordeal as we have never passed through before. Since the first week in April the drought has been severe, and what little vegetation did grow, the grasshoppers have taken. The farmers are in a panic in regard to the starving condition of their stock. It will take years to restore as good stock to the farmers as they had in the spring. Many of our choice flocks have already passed from us, at the greatest sacrifice, rather than see them in such a starving condition. It makes them very poor to look over their farms and see no herds or flocks, or at least feel so. But we may as well bear in mind that "sufficient for the day is the evil thereof." S. AIKEN.

Benson, Vt., Aug. 12, 1860.

PASTURE LAND.

I have a piece of pasture on which I have commenced mowing the bushes, which I shall get mowed and burnt up before your next number is out. Part of it bears swale grass, and a part is covered over with sand or clay from the railroad, and a part of it plowed and planted with potatoes. Had I better plow it all up and plant what I can, and let the remainder summer till, or what shall I do with it? J. M. C.

Holliston, Aug. 11, 1860.

REMARKS.—If you plant with potatoes what you can tend well next summer, you will certainly do much towards thoroughly reclaiming the land. Plow in the fall after the potatoes are harvested, then plow again in the spring and sow with oats and grass seed—and cut the oats for fodder. Prepare compost manure, and as soon as you can after the oats are cut, give the land a good top-dressing. This will place the land in good condition.

HUNGARIAN GRASS SEED—OATS FOR FODDER.

I see by the *Farmer* that its columns are open for inquiries and replies: I have some Hungarian grass and I want to know how I can save the seed and the fodder, both.

In what state must oats be cut that are designed for fodder? I. W.

Clarendon, Vt., Aug. 14, 1860.

REMARKS.—Grass left for its seed to ripen does not make so good fodder as that cut earlier, so that in saving the Hungarian grass for its seed, there will be a depreciation of the stem for fodder. We are not acquainted with the best process for securing the seed, but some of our attentive correspondents may be able to inform you.

Oats intended for fodder should be cut just as the grain is formed, and before it will show any milk, as it is termed, by pressing it between the thumb nails.

SOWING CLOVER SEED IN THE FALL.

Please say whether it will do to sow Western clover in the fall? Will it stand the winter and not kill?

Barre, Aug., 1860. A. BARKER.

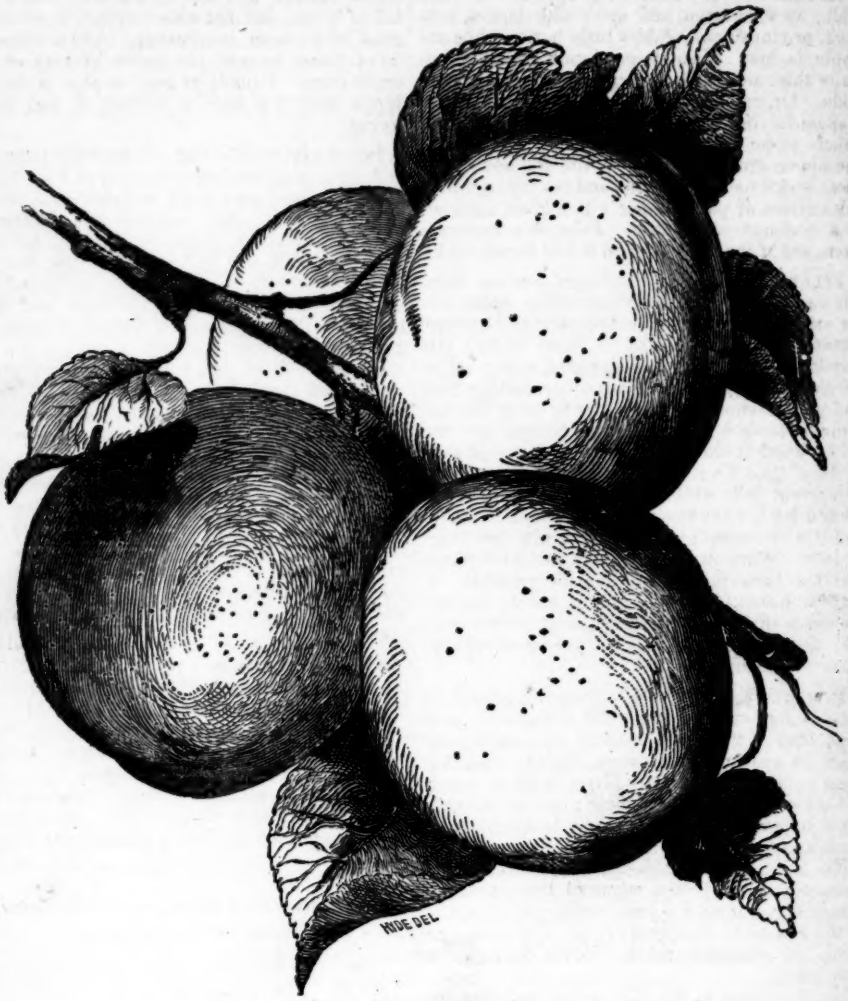
REMARKS.—It is not the practice in New England, either of a few or many, to sow any kind of clover seed in the fall. The difficulty is, that it does not have time to root sufficiently deep before the cold stops its growth. The roots having only a shallow hold, are thrown out by the heaving frosts, and what is called winter-killing is the result. *Buel* says "a better practice would be to sow with buckwheat in July. The plants would have time to establish themselves well in the soil. We, however, think that spring sowing is to be preferred in the Northern States." So do we.

NEW INSECTS.

I discovered on a plum tree in my gardens yesterday, a swarm of insects which somewhat resemble the curculio; on further examination I found them on my pear and apple trees; they all appeared to be moving *up* the tree. I should think I killed enough to fill a pint pot; others I discovered in the act of leaving the ground for the tree? A specimen of the live insect, I send you for inspection. F. D.

Lynn, Aug., 1860.

REMARKS.—We spoke of these insects last week. Hope some of our correspondents will tell us what they are.



A GROUP OF APRICOTS.

In the *Farmer* of August 18, we said, "we are indebted to Mr. J. Q. A. WILD, of Quincy, Mass., for a cluster of the most beautiful apricots that we ever saw. Their fragrance is delicious, and our 'mouth is watering' for them while the artist is sketching their fine proportions. We have never seen fruit of this kind so handsome in the Southern States. They measure 6¼ inches in circumference one way, and 7¼ the other. Will Mr. Wild be kind enough to send us his mode of cultivation, soil requisite, &c., to accompany the engraving which we shall have prepared to illustrate them?"

In compliance with our request, Mr. Wild says,—"I am sorry that I did not send one of the largest ones with them; for there were a number that were three-fourths of an inch larger; but as they were not on the cluster, I did not think of sending one. As for the soil and cultivation, they are not different from those necessary for the culture of the pear and other trees. I think their fine growth is owing to the locality. The tree is trained on a trellis on the west side of the house, and sheltered from the northwest winds, and on cold frosty nights in the spring I have been in the habit of covering it with a sheet."

For the New England Farmer.

DOMESTIC RECEIPTS.

APPLE PUFFS.—Take sour apples that cook well; stew, sweeten, and spice with lemon, nutmeg, or cinnamon. Add a little butter, while the apple is hot. Make a good puff paste, roll it quite thin, and cut it in strips about three inches wide. On one-half of the strips put the apple, a spoonful in a place, leaving room enough between to cut the paste. Cut small openings in the upper crust directly opposite the apple; lay these strips over the others, and cut through both thicknesses of paste, either with a glass tumbler, or a common cake-cutter. Bake in a moderate oven, and if the paste is good it will be very light.

JELLY CAKE.—Take three eggs, one cup flour, one cup white sugar, two teaspoonfuls cream tartar stirred in dry, and one teaspoonful supercarbonate of soda dissolved in warm water; this should be mixed with the eggs and sugar, before stirring in the flour. Prepare square baking tins, and pour in enough of the batter to cover the bottom; bake in a moderate oven, though not too cold; watch it closely, as it burns easy; as soon as done take it out, and spread on either apple or currant jelly while the cake is warm; roll it up and lay it away to cool. Cut through in slices, and it will resemble round cakes with two rings of jelly. When properly made it looks tempting, and the taste is by no means disagreeable. It may be baked in any other form, and by making the cakes thicker, and baking about twenty minutes in a hot oven, it makes a very good sponge cake, without the jelly.

PUMPKIN SAUCE, No. 1.—Prepare pumpkin as for stewing, only cut finer; put in the kettle, and pour over it the same quantity of boiled sour cider as you would if it were apples; cook the same as for apple-sauce. If you wish to use it at tea-time, stir in a little sugar previous to sending it to the table. It can hardly be known from apple-sauce.

No. 2.—Prepare the pumpkin as in No. 1; add three pounds of brown sugar to ten pounds of pumpkin; pour on it a little water, and stew until the raw taste disappears; but not enough to break the pumpkin much. When done, flavor with lemon.

No. 3.—Same as No. 2, only use molasses instead of sugar, and spice while hot, with cinnamon. This sauce answers a very good purpose, and when apples are scarce, is well worth a trial.

STEAMED INDIAN PUDDING.—Two cups full of sweet milk, one tablespoonful of molasses, two eggs, one teaspoonful of soda, two cups full of Indian meal, one of flour, and one of dried cherries, currants, or other fruits, all thoroughly mixed. Have a tin dish ready, into which pour the batter; set it in a steamer, and cook it an hour and a half. Send it to the table hot, and serve with any good sauce.

JOHNNY CAKE.—Two cups full of Indian meal, half a cup full of flour, two cups full of sweet milk, one tablespoonful molasses, and one teaspoonful soda. Bake in a hot oven; it will be very light.

MINCED PIES.—One cup full of finely chopped meat, and two of pickled beets; mix over night, and add spices to suit the taste. Pour on it some West India molasses, and a little good cider vinegar; let it stand till morning; then add one cup full of raisins, and one of currants, half a cup full of sugar, and hot water enough to make the mass of a proper consistency. Add a teaspoonful of butter to each pie before putting on the upper crust. Equally as good as pies made with apples, and in a scarcity of fruit, is well worth trying.

IMITATION APPLE PIE.—Take dried pumpkin, and cut it in pieces about the size of a quarter of a small apple; stew it till soft, but not enough to fall to pieces. Add one cup full of currants, or other dried fruit, to pumpkin enough for three pies; mix well, and put on plates the same as apple; then pour on each pie a teaspoonful of sharp vinegar; strew on some sugar, and spice to taste. Put on the upper crust, and bake. A good substitute for apple pie.

Another.—Take ripe pumpkin, cut it in small pieces, and stew until soft enough to beak easy with a spoon. Take it up, and add sugar and lemon, or other spice to suit the taste. Bake with or without upper crust.

TOMATO PIE.—Take ripe tomatoes, scald, skin, and take the seeds out. Line the plates with paste, and slice on tomatoes enough to cover each about as thick as you would for a tart; spice with lemon, nutmeg or mace; add a little butter, and cover with a good puff paste; bake well, and you will have a pie good enough for the best man in town.

SQUASH PIE.—Stew squash the same as you do pumpkin, allowing all the water to dry away before taking it from the fire. Pass it through a colander, and add a little butter, or sweet cream, and some new milk, but not as much as for pumpkin pies; stir in a small tablespoonful of flour and one egg to each pie; flavor with ginger and nutmeg. Pies thus made of the marrow squash have a close resemblance to sweet potato pie.

E. H. V.

SALT AND FENCE POSTS.—A correspondent of the N. H. *Journal of Agriculture* says:

I have just been to examine some that I set 30 or 31 years ago. I found them all sound and erect. That is, I tried every one of them, and found them to stand firm. They are white oak, about 12 inches square, with the part set in the ground unshaved. After setting, I bored into each post about three inches above the ground, with a two inch auger, at an angle of about 45°, and filled the hole with salt, and plugged it up. The plugs are all in, and the posts look as sound as when set. I put in about one-half a pint of salt to a post. As I tried none without salt, I cannot say whether it was the salt or something else that preserved the posts.

WINTER WHEAT.—Mr. JOHN STEELE, of Stoneham, Mass., showed us some winter wheat of his raising, where he obtained at the rate of *thirty-six* bushels per acre. It was very handsome. He thinks wheat can be raised easily and profitably in this State.

For the New England Farmer.

MUSINGS AMONG THE MOUNTAINS OF NEW ENGLAND.

Top of Grand Monadnoc Mountain, August 15, 1860.

High up in the azure blue, 3500 feet above the "city of notions," I have dined to-day. This is a beautiful mountain, standing entirely alone in its native majesty, towering up into the clouds in its granite stateliness, with no other elevation around it to creat monotony or destroy the romance of a full view of its base. Not a farm extends up to its base but some portion of it may be seen from this point. Deep ravines, huge piles of rugged granite all around, a beautiful farming country as far as the eye can extend, clouds flitting by just above your head—everything seems to inspire one's thoughts with lofty emotions and holy aspirations, and force upon his mind the impression that he is nearer God and the Heavens than those far down in the valley below. What a "masterly inactivity" seizes upon the imagination! Occupying the easterly slope of the mountain, reaching up to the very pinnacle where I stand, and stretching far away upon the rich valley below, lies the town of Jaffrey, one of the best farming towns in Cheshire Co., with its five beautiful little lakes, its many fine fields of wheat now ready for the harvest; its rich patches of corn, oats, rye, barley and potatoes, all looking exceedingly well; its hundreds of young fruit trees recently planted out, loaded with fruit; the old church at the centre of the town where the late Rev. Laban Ainsworth ministered to the people for nearly half a century, said to have been raised June 17, 1775, the day of the Bunker-Hill fight, and now used as a "town house;" back of this is the old burial-ground, which holds the first century of the town, among whom are the following names: Rev. and wife, the father, mother and one brother of Joel, Isaac and Edmund Parke, names familiar to every business man of Boston; O! and a few steps more brings me to the grave of a mother; "and she was the dearest mother that God ever gave"—

"She's sleeping in the valley,
And the mocking bird is singing all around,"—

a sister and a brother.

Four miles from its base, in the easterly part of the town, situated upon both sides of the Contoocook River, is the beautiful village of East Jaffrey, unsurpassed in its healthy location, its romantic scenery, its magnificent hotel, erected the past season for the accommodation of parties visiting the Monadnoc, and the public generally; its beautiful school-house for the district school, (the best in the county,) fine dwellings, busy work-shops and factories; all this lies spread out before me as I stand upon this rock in the clouds and look away to the East. Upwards of 200 persons have visited this spot to-day. The present accommodations upon this mountain are meagre, but I believe ere long some person of means will seize upon the opportunity to build a fine stone house near its top for the accommodation of those wishing to board for a season. The sun-rise seen from this point, in a clear morning, is truly beautiful. In a clear, pleasant day, with a powerful glass, I think Bunker-Hill Monument might be distinctly seen.

About four miles from this point, directly north, is the town of Dublin, another good farming town. Here is where the late Rev. —— Sprague spent his ministerial life, about whom, in connection with the Rev. Laban Ainsworth before mentioned, so many curious anecdotes have been related. Here in Dublin, is the dividing ridge between the Connecticut and Merrimac Rivers. The church in which the eccentric Sprague used to preach was literally "the dividing of the waters" as referred to in the Scriptures, for the water from the north side of the house went to the Merrimac, and that from the south side to the Connecticut. Upon the western slope lie the towns of Troy and Marlboro'. Next beyond is the town of Keene, a wealthy and beautiful town. Far away in the smoky distance, faint and blue, rise the broken ridges of the Green Mountains.

The mountain cranberry grows luxuriantly to within a few feet of the top of this mountain, and the vines are now nearly red with a fine crop of fruit. I would suggest to persons experimenting with cranberries on upland to plant out some of this variety. The barn swallow is up here to-day twittering about merrily, while a large portion of them left for the South about the fourth inst. I had a fine flock of martins this season, which left the fifth inst. From some cause or other the swallows and martins have left about three weeks earlier than usual. The spring time is gone, the summer is nearly ended, and the sweet little songsters that came up among these mountains to warble their cheerful notes to the tillers of the soil, and obey the laws of propagation by multiplying their species, are nearly silent; the season of the rose, the noblest of flowers, is gone, but stupid is the man who will suffer his garden to be void of flowers until cut down by the icy hand of the north. But the most interesting of all seasons, the harvest season, is at hand. Never did crops look more promising than at this moment, in this section. The midge is doing some injury to the wheat crop here, but the earliest fields are so far advanced that but little damage will be effected.

East Jaffrey, Aug., 1860. L. L. Pierce.

For the New England Farmer.

IN-DOORS-FARMING.

Messrs. Editors:—I noticed in your issue of June 30 a short article on "In-Doors-Farming," from a New Hampshire farmer's wife. I think, with her, that it is too often the case that the farmers' wives are the most hard-working class. Their cares and anxieties, it is true, are almost endless; still, I think the writer has enumerated some things that no farmer who cares for his wife as he ought, would expect her, as a general thing, to do. I think the milking, feeding hogs and turning the churn crank, belong to the men folks, as a general thing. But if they are sick, or unavoidably obliged to work unseasonably late getting in hay, or grain, before a rain, or anything of that kind, they will find no one any more willing than myself to help in these matters. No reasonable man will ask his wife to do these things, much less expect them, as a matter of course.

Another thing. I don't think it hurts the men folks to help wash. They do their share, and no small share either, at dirtying the clothes; why, then, should they not help wash them? perchance

they might be more careful. Two hours' work of a man with a washing-machine, on Monday morning, will help along the week's work in-doors more than twice that time can help along the out-of-doors work. My husband either himself helps wash or finds a hand to do it. He says it is cheaper than it would be to hire a girl, provided there was one to be found. No matter how rich a farmer is, he can't hire a girl to do house-work, in this region, for there are none to be had. Therefore, if we are fortunate enough to have daughters of our own, it is our duty to instruct them in all the branches of in-doors farming. And let us not allow the idea to creep into their heads that it is degrading to work, but rather teach them that it is honorable to *know how* to work, and to be willing to do it.

A Northern Vt. Farmer's Wife.

For the New England Farmer.

WHAT MAKES THE WATER BAD?

BY JUDGE FRENCH.

This inquiry is for the benefit of the rural districts, and of those who are supplied from wells. It is plain enough what makes Croton and Cochituate water bad, because do we not all read in the papers, how those great disgusting eels come squirming out of the pipes, leaving, nobody knows how many that have been long past squirming, all along the line, and have we not all seen the monstrous, horrid, and ill-favored creatures represented in shop windows, by those who sell filters, and by other disinterested persons? O, no! people who live in the country, do not drink that sort of stuff. And so of cistern water; country-bred people are not to be imposed upon with any of your rain water beverages, filtered and purified though it be, by forty layers of charcoal. Like the true prince in the fairy tale, who could feel a single pea in his bed at the bottom of forty feather beds, they who live in the country are not to be deceived by any substitutes for the pure and sparkling water of the crystal fountains.

Nevertheless, we do not unfrequently hear a mild murmur of complaint, as we visit our friends in the country, or call at a neighbor's in the village. At one time it comes in the form of an apology. "Our water is not so cold as we could wish, the fact is, there is something the matter with our well, and we are obliged to send to Mr. Smith's for water to drink." At another it takes the form of scientific investigation. "What *can* be the reason of this little disagreeable odor in our well-water? It is so very slight that perhaps you do not observe it." Of course, we *had* noticed it, and setting down an untasted glass, wondered how any body could drink a drop of it. Wonderful is the force of habit! Here is an illustration in point. We mentioned to a farmer's wife, that although turnips fed to cows would give a bad flavor to butter at first, yet after a few days, the effect was not observable. "Yes," said she, "our folks tried that last year, and we found that after a few days, there was no bad taste to the butter, but when we came, months afterwards, to use the butter I had put down at the same time, we found the turnip taste as bad as ever; the fact is, we had all got used to the turnip flavor, so that we did not notice it." Yes, wonderfully kind is Nature! We are informed by a tanner who had been long in the business, that he had not smelt any thing for twenty years, and a lecturer on bees, at Yale, last winter, stated that after being stung a few times by bees, people usually suffered very little from their sting. Whether habit dulls the sense of pain, or whether the first half-dozen stings operate by way of inoculation, let doctors decide. If you wish to learn whether there is a bad taste to water, ask a stranger. Everybody perceives a peculiar quality in water to which he is not accustomed.

But to return to our question—What makes the water bad? Let us deal tenderly with our suffering friends. Nobody wants to be told plumply that he is daily imbibing the drainage of his vaults, stables and sinks, and pouring out the same delicious compounds to his wife, and children, and guests; especially nobody who lives in the country, where they boast of not only pure air and water, but even pure milk. Let us not add insult to affliction, by any rudeness in our mode of dealing with a subject so delicate. An innocent and respectable man may have an infectious disease, but that is no reason why he should be made to acknowledge it in the public streets. His physician will privately and kindly say to him. "The symptoms are plain, Sir, and the remedy is simple; we doctors know very well that every man considers himself an exception to all general laws, that he expects to draw the first prize in the lottery, and to be the last man killed in the battle. Do not trouble me with any protestations that it cannot be possible, nor say, 'Is thy servant a dog,' but wash in the Jordan, and be healed."

A hundred farmers who will read this paper, have been troubled with bad water in their wells. What makes it bad? Let us reason together calmly. You will agree that there is some cause. We know that the rain comes clear from the clouds, that is to say, substantially so, and that therefore the impurity which exists in the well-water is in some way acquired in its passage upon or through the earth. The source of the trouble is then to be sought near the well, because even impure water would be filtered by a long passage through almost any kind of earth.

Whence comes the water which we raise from wells? Primarily from the clouds. Then it soaks down, and in sandy soils usually rests on clay,

gradually percolating towards lower places, and bursting out on hill-sides and near swamps in springs. Wells in sandy places are usually mere holes where the rain water stands clear and pure, if it is not corrupted in its passage down from the surface. In soils not homogeneous, such as exists in stony districts, the rain water is collected by fissures and seams, and various obstructions, into little streams or veins, which we strike in digging, or which are drawn aside from their course by our excavation. This water is usually cold and clear, though often hard, from some quality acquired on its underground passage. "But the bad water does not come from those deep springs?" Certainly not, but as it comes from *somewhere*, let us inquire further. About forty-two inches of water annually falls on every foot of your farm. What becomes of it? It falls in your barn-yard, and you are too good a farmer to let it run off the surface, and so of your garden full of manure, and your fields.

Your sink drain carries somewhere a constant stream of filth, usually received into some mere excavation, and so of the vaults for matters still more offensive. Sometimes those receptacles are water-tight, of brick and cement, but on farms this is the exception. The vast quantity of rain water, with all the impurities acquired in all those ways, passes downward, and where does it go? It seeks the lowest level and outlet. We should expect a four-foot drain in ordinary cases to *draw*, as it is called, some twenty to thirty feet, and to take off the water down to nearly the level of its bottom, in forty-eight hours. A deep pit from which you should pump out the water would drain much further. You would expect such a pit to drain everything within many rods of it. All the drainage water would gradually find vent in that pit. Just such a pit is your well. It is the lowest opening for all the water that descends from the surface into the earth for a certain area. But the water is good a part of the year, and only very bad in summer. It is hardly civil to say that your broth is thinner when much diluted. We will therefore suggest that so large a quantity of pure water flows into and out of wells supplied by veins of water in the wet season, that the small proportion of surface water is not appreciable; or we may suggest that when the well is comparatively full, the surface water runs off at the surface, because it finds little or no descent toward the well. It is evident that no water can run into a well already full, and that the depth of the well for drainage, is its depth to the surface of the water.

We have been consulted many times on this subject, and often have suggested what has proved to be the true source in the particular case. The list of causes may not have a poetical savor, but what makes the water bad in most cases, is, *first*, some dead animal, as a dog or cat, toads or frogs, and in sandy soil, angle-worms, which often crawl down for moisture and die. It is surprising how small a decoction of these dead creatures will give an "ancient and fish-like smell" to a whole well of water. *Secondly*, the drainage from stables and barns. *Thirdly*, and generally, the drainage from sinks and vaults, which, after a shorter or longer time, so saturate the earth that it cannot longer filter out the impurities, and they pass downward with the surface water.

Our article is already too long, and if the subject seems worth pursuing, we may speak of the remedies for existing troubles of this kind in the future.

For the New England Farmer.

THE OLD BARN.

Dear Sir:—The following, to me, at least,) beautiful fragment of poetry I chanced to read some time ago, as it was floating along on the public press. I know not whether you have seen it before, and even if you have, I think it will be new to most of your numerous readers. I therefore send it to you for insertion in the *Farmer*, if you think it worthy to occupy a place in your valuable journal. I know not the author, but its perusal will cause many a heart to travel back to to the scenes of boyhood, while memory, ever faithful, will point to the *Old Barn*, situated on the old homestead, so aptly portrayed in the following verses—the scene of many a frolic and pastime in days long since gone by.

Boston, Aug., 1860. John F. Tilton.

Rickety, old, and crazy,
Shingleless, lacking some doors—
Bad in the upper story,
Wanting in boards in the floors;
Beams strung thick with cobwebs,
Ridgepole yellow and gray,
Hanging in helpless impotence,
Over the mows of hay.

How the winds turn around it!—
Winds of a stormy day—
Scattering the fragrant hay-seeds,
Whisking the straws away—
Streaming in at the crevices,
Spreading the clover smell,
Changing the dark old granary
Into a flowery dell!

O, how I loved the shadows
That clung to the silent roof—
Day-dreams wove with the quiet
Many a glittering woof.
I climbed to the highest rafter,
Watched the swallows at play,
Admired the knots in the boarding,
And rolled in billows of hay!

Root Culture.—This subject was under consideration at a late meeting of the "Harvest Club" of Springfield, Mass. Seven members of the club had raised last year, an aggregate of 15,000 bushels—a single individual 4000. One

and a half acres produced twenty-eight tons of mangolds; one-fourth of an acre 250 bushels. Commencing early in September the lower leaves of the mangolds may be fed to stock. It seemed to be admitted by the club that carrots do not increase the flow of milk when fed to cows, but that turnips do. A correspondent of the *Country Gentleman* says that a person of his acquaintance who sold milk in Troy, N. Y., after careful experiments with various roots to secure the greatest quantity of milk, gave the preference to the sugar beet, and raised that exclusively while he remained in the milk business.

For the New England Farmer.

ABOUT A ROLLER AND GRASS SEED.

DEAR SIR:—What is the best kind of roller for farm purposes? Are they to be found at the agricultural stores in the city? If so, what is the material,—wood, iron or granite? And what the cost?

In answering the above, you will oblige one of your constant readers, and one, too, who has for many years been a book farmer, and for several years last past, a practical farmer. In this particular, he has had no experience, save the loss of a bushel of herds grass seed, sown two years ago, last of September, on a piece of light upland, not one seed of which has ever been seen, or heard from as yet, though the ground has not been since plowed. Another bushel of the same lot of seed, sown at the same time, on the meadow land near by, came up well, and has done well. Two acres of meadow land, prior to that time full of stumps, windfalls, withey bushes, cat-o'-nine-tails, bullrushes, frogs, snakes, lizards, and all sorts of offensive smells in the height of dog-days, has been reclaimed, drained, and covered with yellow sand, in places where the plow did not reach the white two inches deep, spread from a horse cart in December, after the frost had stiffened the muck hard enough to bear, has produced since that time, what may be termed with propriety a heavy burden of hay. It was not weighed, but there was as much as could be made upon the ground. I send you, herewith one head of the herdsgrass, that grew upon the muck beds, 11¼ inches long. This must not be taken as a specimen of all the rest. This is the only head of that length found; 7¼ inches may be deemed nearer the average length of heads. Many heads were found eight, nine and ten inches, but this is the only one 11¼ long. Why the herdsgrass seed took well on this, and proved a total failure upon the adjoining upland, I do not know. One farmer of some experience has told me, "it would have come, if I had rolled the land after sowing." He remarked, "The late Judge Hayes, of South Berwick, could never grow a good catch of hay seed on the light soil of his farm, until he used a roller." I therefore want a roller, if for no other reason, to experiment with.

OLD BERWICK.

Rockingham County, N. H., 1860.

REMARKS.—The rollers sold at the agricultural stores are usually iron, and cost from $10 to $30, according to size. Any small seeds come better to have the earth pressed a little about them. Where grain is sowed, have you not noticed that it comes quickest and best in the tracks of the cattle?

THE USES OF MOUNTAINS.

Rev. T. Starr King, in his work on "The White Hills; their Legends, Landscape and Poetry," published by Crosby, Nichols, Lee & Co., thus pleasantly discourses upon one of the uses of mountains:

"Mr. Ruskin notes it as one of the most prominent uses of mountains that they cause perpetual changes in the soils of the earth. The physical geographers assure us that if the whole matter of the Alps were shoveled out over Europe, the level of the continent would be raised about twenty feet. And this process of leveling is continually going on. By a calculation, which he made in the valley of Chamouni, Mr. Ruskin believes that one of the insignificant runlets, only four inches wide and four inches deep, carries down from Mont Blanc eighty tons of granite dust a year; at which rate of theft at least eighty thousand tons of the substance of that mountain must be yearly transformed into drift sand by the streams, and distributed upon the plain below. On Whiteface mountain, of the Sandwich group, a slide took place in 1820 which hurled down huge blocks of granite, sienite, quartz, felspar, and trap-rocks, and cut a deep ravine in the sides of the mountain several miles in extent. But compensation was made in part for its destructive fury. An extensive meadow at the base, which had borne only wild, coarse grasses, was rendered more fertile by the fine sediment, here and there four or five feet in depth, that was distributed upon it, and now produces excellent grass and white clover. Take a century or two into account, and we find the mountains fertilizing the soil by the minerals they restore to it to compensate the wastes of the harvests. The hills, which, as compared with living beings, seem everlasting, are in truth, as perishing as they. Its veins of flowing fountains weary the mountain heart, as the crimson pulse does ours; the natural force of the iron crag is abated in its appointed time, like the strength of the sinews in a human old age; and it is but the lapse of the longer years of decay which, in the sight of its Creator, distinguishes the mountain range from the moth and the worm."

SHEEP IN TEXAS.—A Texan correspondent of the *Country Gentleman* says that he has been informed of one man who had 400 and others from 100 to 200 sheep frozen to death by the severe northers of the past season. One gentleman who had a varied flock of 500, containing many Merinos and common Mexican sheep, a few Oxfordshire sheep, a recent English stock from the flock of John T. Andrew, of Cornwall, Ct., lost sixty Merinos, &c., from his flock during the norther of the first of December, while the thick-fleeced Oxfordshires seemed quite indifferent to the cold.

THE BAROMETER AND ITS USE.

The attention of the agricultural community having been called to this instrument the past season, more directly than ever before, mainly by the advertisements in our columns and in other Agricultural Journals, of the instruments manufactured by Messrs. John M. Merrick & Co., of Worcester, we propose in this article to explain briefly the character of the instrument, and its utility as a weather-guage.

The word *Barometer* is derived from two Greek words, signifying weight and to measure. The instrument, therefore, is *to measure weight*, as applied to the atmosphere, or is, in other words, to determine the pressure of the atmosphere. It is well known that the weight of a column of air one inch square, and of the height of the atmosphere above the earth, is equal to about 15 lbs. This column will then sustain a column of water, mercury or any other fluid of similar size, and high enough to make it equal in weight. The column of water which can thus be sustained is 32 feet in height, the column of mercury about 29 inches. Galileo commenced, near the close of his life, experiments to ascertain why a column of water could be raised in a vacuum only to the height of 32 feet. Without completing these experiments he died, and left his pupil, Torricelli, to pursue the investigations. He used mercury; filling a tube, closed at one end, with the fluid, he placed his finger over the other end, which he then immersed in a basin of mercury, holding the tube upright. Upon removing his finger, the mercury in the tube sunk and finally rested at a height of 28 inches above the level of that in the basin. Repeated experiments resulted in the same way, and thus was discovered a principle in natural law which is as unchangeable as the nature of the Creator.

The Barometer thus being invented, it was not long before the changes of the atmosphere were discovered to affect it. Pascal, a French philosopher, also inferred, and established the truth of his inference by experiment, that the Barometer would indicate a lessened pressure of the atmosphere by ascending with it above the ordinary level of the earth's surface. These experiments were conducted in the years 1642 to 1648. Numerous attempts have been made to modify the form of the barometer, but those now most approved are essentially the same as Torricelli's, a straight inverted tube, about thirty-two inches in height, and mercury as the measuring liquid. Some have been made where no liquid was used, but the weight of the atmosphere was determined by its pressure upon the sides of a metal box from which the air had been exhausted. The mercurial barometers are, however, the standard, and much preferred by scientific men.

It is obvious that the weight of the atmosphere is not always the same. The presence of moisture, the variations of heat and cold, and the force of the winds, all operate to make the weight of the atmosphere at any point, an almost constantly changing quantity. Observations for now more than two hundred years have enabled us to judge with much accuracy, by these changes in the weight of the atmosphere as indicated by the barometer, of approaching changes in the weather. It has been found that almost invariably certain atmospheric changes precede a change of the weather from wet to dry, or from dry to wet, and that the barometer never indicates so high an altitude during a storm as during dry weather. These observations have established a set of rules for judging of approaching changes of weather, which we shall give at the close of this article.

The index affixed to some barometers, marking upon a circular disc the height of the mercury, with the alleged corresponding condition of the atmosphere, is of no value, and is calculated to mislead. In fact the altitude of the barometer at any given time is not alone a guide to the weather which may follow, but the true guide is—whether the height indicated is more or less than that indicated a short time previously; whether the mercury is declining, or rising, at the time of the observation.

There are also changes of the barometer in our latitude, which indicate no corresponding change of weather. For instance, the mercury during fair weather may stand at a high altitude in the morning and decline a little towards the middle of the afternoon, with no variation of the weather following. But should this change *continue*, and the mercury still decline, and *not return* towards midnight to its altitude in the morning, then a change is sure to follow. We notice this change in a Timby's Barometer which hangs by our side as we write this —Tuesday P. M., (Sept. 4th,)—which has declined one-tenth of an inch since 9 o'clock this morning. As it fell in a similar manner yesterday, and rose again at nightfall, we apprehend no change unless this decline continues. It was a knowledge of these changes which led us last week in noticing this instrument, to caution people against imputing to that, faults which exist only their in own ignorance of its principles, and to advise them to obtain an understanding of the laws which govern it, before judging falsely of its indications. Mr. Timby's Barometer is a simple instrument, its indications plain to be read and easy to understand. We believe it to be thoroughly made, as the mercury has that brilliant lustre which bespeaks its purity, and in inclining the tube it strikes against the top with a sharp click which indicates a perfect vacuum. These points show a correct construction; and as the principle of

the barometer's action is unchangeable, it follows that a correct and careful construction of the instrument is all that is needed, to make it as perfect as any instrument of the kind can be.

This article is already longer than we designed, and we close by giving the following rules from a distinguished English authority, which we advise all who own a barometer to preserve and consult:

1. After a continuance of dry weather, if the barometer begins to fall slowly and steadily, rain will certainly ensue; but if the fine weather has been of long duration, the mercury may fall for two or three days before any perceptible change takes place; and the longer the time that elapses before the rain comes, the longer the wet weather is likely to last.

2. If, after a great deal of wet weather, with a low barometer, the mercury rises slowly and steadily, fine weather will come, though two or three days may elapse before the change; and the fine weather will be permanent in proportion to the time that passes before the perceptible change takes place.

3. If a change of weather immediately follows the motion of the mercury, the change will not be permanent.

4. If the barometer rise slowly and steadily for two days or more, fine weather will follow, though it should rain incessantly during these two days. But if on the appearance of fine weather, in the above instance, the mercury begins to fall again, the fine weather will be very transient. Apply the reverse of this to a change from fair to rainy weather.

5. A sudden fall of the barometer, in spring or fall indicates wind; in the summer, with a sultry atmosphere, an approaching thunder-storm; in the winter, if after continued cold, a change of wind, with thaw and rain. Or should the cold be unabated and the mercury fall, snow may be expected.

6. Rapid fluctuations of the barometer do not indicate permanent change of weather; only the slow, steady and continued changes of the mercury.

Local atmospheric influences may vary these rules somewhat, and therefore experience is necessary to enable a person to judge with entire accuracy in any case.

For the New England Farmer.

CORN AFTER RUTA BAGAS.

MR. FARMER:—Although a mechanic by trade, I am not strictly one by nature, for I take a great interest in the farming world, and enjoy no little pleasure in reading many articles on the subject in the *Farmer*. Many times I have been tempted to reply to inquiries, but thinking that there were many more capable of doing so than myself, I have deferred until now. In perusing the pages of your issue of the 18th inst., I noticed an article by "T. M.," which contained some ideas which appeared rather erroneous to me. He says "Neither corn nor tobacco will grow after ruta bagas." He adds, "Why not? What will?" I know nothing about tobacco, (and am not desirous to learn,) but I do know that corn will grow after ruta bagas. While writing, I can look out upon a piece of corn, which looks as well as any I have seen this year; it is well silked, and has not a few ears, and last year at this time there was a good piece of ruta bagas upon the same ground.

Perhaps the "secret of success" is this: The man who cultivates the above-mentioned ground uses a large quantity of wood ashes.

West Minot, Me., Aug., 1860. OBSERVER.

For the New England Farmer.

FARMERS' WIVES AND DAUGHTERS.

Farmers' Wives Hard Workers—The Other Side—Farmers and Mechanics—Pursuit of Knowledge under Difficulties—Latin Lessons—Churning and Frying Pancakes—Mountain Girls must Hunt for more Sunshine!

MR. BROWN:—Will you allow another "farmer's daughter" to speak "through the columns of your paper?" Not in pity and in sympathy for that much abused band of farmers' wives,—but rather to congratulate them upon their happy situation; and also to correct some erroneous ideas advanced by our friend from the "Old Granite State."

Having spent considerable time in mechanics' families, I may safely say, that it is not a "well established fact, that farmers' wives are the most hard working class in existence;" that their labors, generally, are not more arduous, and that they have quite as much leisure for improving the mind, as they would have in other stations of life.

Is there not as much intelligence and refinement in a farmer's family as in a mechanic's? A farmer's wife whose "ideas of human nature and the world are limited to her native village" can scarcely be found. And a very large proportion of our present teachers are from farmers' families. Does this show that their advantages for education are limited? There is less real poverty among farmers than among mechanics. But suppose, in some instances, rigid economy is necessary in order to live comfortably. The "expansion of the germs of intellect" is not dependent upon the "profits of the farm." Any brave-hearted, courageous girl, may acquire a good education, although a course of study at a public institution is not permitted.

Very little money, (and a willing heart will find ways to earn that little,) suffices to furnish all necessary books; and no one who has not in earnest tried it, is aware how many leisure moments there are in a day, which may be devoted to study. I assure you that a Latin lesson may be very readily committed to memory, even while turning a churn-crank, or frying "pancakes!"

With regard to the young lady mentioned by the "farmer's daughter," permit me to say, (and I have no doubt that you thought the same, Mr. Editor, although too gallant to express it!) if said young lady refuses to marry a farmer, simply because she is fearful of hard work, and because he has not wealth to provide a piano and large library, she deserves to remain single through life.

It is the fashion here in Massachusetts, when we cannot afford a piano without being in debt for it, to make all the music we can without it,—

and economize, with faith that one day it will be forthcoming, "free and independent."

No heart need pine for pictures upon the walls, when all about us we have paintings more beautiful than ever human artists could form. Here, from my window, is a view,—a blue lake resting like a gem in its setting of foliage, and the "everlasting hills" touched up with a golden sunset light,—a view which fills my heart with gratitude that my home is far from the busy town,—that I am a farmer's daughter.

I trust our mountain sister will, by searching, find more sunshine in farm life than she now dreams of; and not doom the "rising race" of young farmers to perpetual bachelorship, by "striking so mournful a strain." ANNA.

W——, Mass., 1860.

EXTRACTS AND REPLIES.

SUCKERS AMONG CORN.

I wish to inquire of you, or some of your farming correspondents, if any advantage is derived in cutting out the suckers among corn? I have a field of corn which is very stout; it is planted four feet apart each way, and I have left only four spears in the hill, but the suckers have come out so thick that it makes a complete swamp of the field. O. L. SANBORN.

Concord, N. H., 1860.

REMARKS.—Opinion is divided as to this matter. We head in grape vines, squashes, tomatoes and trees; why not subtract a portion of the surplus plants among corn on the same principle? We should be glad of opinions on this point from observing and experimental persons.

IMPROVEMENT OF SHEEP FOR WOOL.

Having just commenced the business of keeping sheep, and being obliged to make up my flock of about five hundred from such as I can find for sale from half-blood Merino to common Canada, I find it necessary to improve in some way on the quality of the wool. Whether it would be best to cross them with a Merino or South Down, I am not able to say. Any suggestion in regard to this matter will be gratefully received. FREEMAN DOANE.

REMARKS.—Among our correspondents, we have those conversant with this matter, persons who understand the results of the crossings, and the demands of the market for wool, and we prefer their opinions rather than offer our own, made up from more limited experiences. The question asked is important, and we hope will be replied to early.

QUESTIONS ABOUT CIDER MILLS.

I would like to inquire through the columns of the *Farmer* of whom I can get information concerning cider-mills, and what kind are the best? Whether those that press the pomace immediately are equal to those where the cider can remain in the pomace for a length of time? What the arrangements are for pressing a large cheese, or making, without the use of straw, and where any are located of the common nut mill kind, run by water power, where the apples are put in above into a hopper, and the pomace falls in a bed beneath, if there are any such in this vicinity?

Wethersfield, Ct., 1860. A SUBSCRIBER.

REMARKS.—We do not possess the knowledge wanted. Will some one who has it reply?

FOWL MEADOW GRASS.

Will you please inform me through your paper, whether the enclosed specimen of grass is the genuine Fowl Meadow? If not, what kind of grass is it?

Ossipee, N. H., 1860. S. B. CARTER.

REMARKS.—We have no doubt but it is.

RUTA BAGAS—CABBAGES—ORCHARD.

Will you inform me through the *Farmer* what ruta bagas are worth per bushel in the fall, and how many pounds to the bushel? Will they and cabbages succeed well on the same ground, for two or more years, with a liberal coat of manure each year, say in an orchard which has been set with apple trees eleven years? S. S.

Scituate, Aug. 22, 1860.

REMARKS.—Ruta bagas vary in price as do potatoes and other vegetables. They are usually sold by the barrel, and bring, by the quantity, from sixty cents to one dollar per barrel in Boston, rarely, however, exceeding eighty cents. Any crop will succeed well after them if the land is highly manured, and the crop well tended. But in a well grown orchard of eleven years, a large crop of anything ought not to be expected short of a most liberal manuring.

A LIST OF FLOWERS FOR A NORTHERN CLIMATE.

Having seen a piece in the *Farmer* inquiring for a list of hardy biennials or perennials, I thought I would give the names of a few, viz.:

Peony, Oribus, Moss Pink, Golden Moss, Phlox, Chinese Larkspur, English Bluebell, Fleur de Lis, Monkshood, Featherfeu, Spiderwort, Columbine, Indian Pink, Sweet Rocket, Foxglove, Lady of the Lake, Double Creeper, Crocus, Daffodil, Tulip, Queen of the Meadow, Magnolia, Garden Lily, Tiger Lily, Day Lily, White Lily, Climbing Honeysuckle, Iceland Moss, Myrtle, Napoleon Violet, Carnation Pink, eleven kinds of Roses, red and white, Snowdrop, Muskmalua, Lebra Mallows, Honesty, Syringa, Dielytra Spectabilis, Persian Lilac, Canterbury Bell, Verbena, Jonquil, besides two hundred varieties of annuals and one hundred varieties of house plants. G. S. JACOBS.

Bolton, Mass., Aug., 1860.

MR. EDITOR:—A communication appeared in the Boston *Cultivator* of 1853, from which I copy the following, viz.:

PLEURO PNEUMONIA.

"This terrible scourge to animals it is said can be prevented by inoculation. Dr. Williams, a Belgian, made the discovery, and has put it to the test through a series of experiments from 1850 down to the present time (1853.) 108 cows and oxen thus treated have been completely protected from the contagion, while of 50 placed under the same circumstances 17 have taken the disease. The doctor takes the virus from the animal suffering under the disease and inserts it underneath the tail of the sound animal. This done, the matter gives evidence of its effects, and the animal is rendered unassailable by the disease. If this proves to be effectual, as it thus far promises to be, the doctor will have performed most valuable service in the world."

Glover, Aug. 13, 1860. M. P.

HILL-SIDE BARNS.

Constructing barns upon side-hills is a practice which is gaining favor among the best farmers in this country. Having once become acquainted with the advantages of such a location, we are sure no farmer would be willing to construct his barns in any other manner, if this were practicable. The testimony of the *Valley Farmer* on this subject is as follows: "The most convenient arrangement for a stock barn is upon a side-hill, where the hay and grain may be carted in upon the upper story, and pitched into the bays below. This arrangement saves a great amount of labor in hauling the feed for the stock. Another advantage of a side-hill barn is the manure may be deposited in a cellar below, where the whole of the liquid portion can be saved, and where the whole can undergo

a degree of fermentation before it is exposed to the washing rains and the weather outside. Upon the lower side, too, the cellar can be approached with the team and carts, and material added to the manure heap to absorb the urine and add to the general stock, or to render the whole easy of access for hauling away.

"A barn thus arranged not only saves a great amount of labor in hauling the hay, &c., in stacking and feeding, but the quality is greatly preserved by being housed at once after it is cured. Add to these advantages the still more important consideration—the comfort and thrift secured to the animals in consequence of the protection afforded from the storms of winter, and it will be found that no more profitable investment can be made connected with the farm than in the construction of a suitable barn."—*Homestead.*

For the New England Farmer.

THE IMPROVEMENT OF OLD PASTURES.

A fine Field of Potatoes—Winter Wheat grown on old Pasture Land, with the use of Bone Dust.

The improvement, within a reasonable cost, of the old run-out pastures of New England, is, to my mind, an interesting subject, and one of the most important branches of cultivation our farmers can undertake. Having had my attention directed to this subject for several years, I have been induced to try various methods for the renovation of such lands—the results of some of which have been given in former communications to the *Farmer*. Several interesting improvements of these lands are now in progress in my immediate neighborhood; and having to-day visited some of the fields either already made productive as pasture, or undergoing tillage, to bring them into that condition, it is now my purpose to give the details, in part, of what was observed. In a communication to the *Farmer*, in August or September of the year 1856, I described a tract of sixty or more acres of worn-out pasture-land, then recently purchased by our Vermont Asylum, the improvement of which had become a desirable object, and one in which, from some official connection with the Institution, I felt an active interest. This tract lies more or less rolling, but nowhere so steep, or uneven, as to be inconvenient, or objectionable for plowing. The improvements commenced upon it five years ago have been steadily progressing since, in pieces of ten to fifteen acres each, until some of them now have sufficient age to give them a certain character, from which some conclusions can safely be drawn. I shall first speak of three fields comprised within this tract.

The first piece looked at to-day, a field of about fifteen acres, is now covered with a promising crop of potatoes. The land was the oldest kind of bound-out pasture, covered with moss, and a feeble growth of inferior grasses, interspersed with sweet fern, shrub pine, and other bushes. The largest bushes were snaked out, root and branch, by taking a chain-hitch to them with the oxen; and others were cut down to the ground, and the little stumps turned under by the plow. In November last, the large breaking-up plow, drawn by four oxen, was started, and the land turned over about eight inches deep, in the nicest and most thorough style. In April last, it was harrowed, furrowed out in rows one way, three feet and a half apart, and a shovel full of compost, made of muck and ashes, was dropped once in every three feet in the rows. The potatoes were dropped upon the compost, and the planting finished about the 20th of April. The muck used had lain in a large pile on dry land, for a year or more; and last fall it was composted with unleached ashes, using about three bushels of ashes to an ox-cart load, or one-third of a cord of muck. After lying in a heap a few weeks, the compost was shovelled over, and then carted upon the plowed land, and deposited in heaps of ten to twenty loads each, at convenient places for reloading and dropping in the hills at planting time.

The potatoes were hoed twice, using the horse and cultivator between the rows at each hoeing. The tops have made a large and healthy growth; they stand about three feet high, and spread out laterally, so as to touch each other from row to row. The hills were examined to-day in various parts of the field, and the potatoes found to be large and sound, and promising a good yield. It is well known, that of late years, our best potatoes usually come from these old pasture lands. The varieties planted are the New Jersey Peach Blow, the Davis Seedling, and the Prince Albert, or St. Helena. The New Jersey Peach Blow, a strong growing, healthy and excellent variety, bears no resemblance to the kind commonly known as Peach Blow throughout New England.

This piece of land is to be plowed again, late this fall, and harrowed smooth and fine. On a light snow in April following, it is to be liberally seeded with red and white clover, herdsgrass and red top seeds, for pasture. No grain is to be sowed, as a crop of that kind would draw too much from the land, and injure it materially for pasturage. Besides, the grasses will catch better, and sooner afford a full bite of pasturage, if sown alone, than they would if shaded and encumbered with a grain crop. The old sward turned under, and rotted and subdued by cultivation, will afford nourishment to the new grasses, and thus secure a productive pasture for several years.

In November coming, some fifteen acres of adjoining land, similar to what this piece was, will be plowed up, and next season manured and planted with potatoes, and afterwards seeded down to pasture. If, however, experience should indicate that an additional stimulus to the land would, on the whole, be advisable, then future fields will be dressed with about 500 pounds of bone dust per acre, at the time they are re-seeded to pasture.

The next field visited was a piece containing twelve acres, plowed up five years ago, this present month, and eight acres dressed with 400 pounds of bone dust per acre, two acres with 300 pounds of Peruvian guano to the acre, and two acres each with twenty bushels of unleached ashes, and the land immediately stocked down with grass for pasture, no grain crop being taken off. Having spoken fully of this field in a communication to the *Farmer* four years ago, and again two years ago this present month, I need not now go into particulars about it. Suffice it to say, that the land has afforded excellent pasturage, ever since it was thus dressed and re-seeded, and the cows appear to be very fond of the herbage, for they

keep it always cropped as short and smooth as a newly-shaven lawn—indeed, any one acre has been more valuable for what it has produced, than have any five acres of the adjoining land not yet in like manner taken in hand for improvement. The contrast between this piece and another of about equal size lying beside it, but not yet assisted by cultivation, is so strikingly favorable to the former, that I wish every reader of these remarks might have been with me to-day to observe it. It may be remarked in passing, that, while each of the three fertilizers used on this field gave good results, the bone dust appears to be of the most lasting benefit to the land.

Another field of about ten acres was looked at, which two years ago bore a remarkable crop of potatoes. It was manured in the hills with muck and ashes, and planted and cultivated in a manner similar to the fifteen acres first mentioned in this article. After harvesting the potatoes, the land was plowed again, and smoothly harrowed, and the following spring, or a year ago last April, it was stocked to grass for pasture, no grain being sown. The grass came up well, and the land is now covered with a very thick sward, composed of herdsgrass, red-top, and red and white clover, yielding the best of pasturage. The color of this field is of so deep a green, as to make it at once distinguishable at as great a distance as the eye can discriminate shades of color at all.

The next land visited was a field belonging to my friend, Richard Bradley, Esq. It was plowed up a year ago last November, and, in the following April, planted with potatoes, manuring them with a shovelful of compost in each hill. The compost was made of muck and ashes. Last April, the land was plowed again, 500 pounds of bone dust sown to the acre and harrowed in, then twelve quarts of herdsgrass, one bushel of red-top, twelve pounds of red, and four pounds of white clover seeds sown to the acre, and the field rolled. The grass has made a great growth, and a full swath might now be mowed.

Then came a smaller lot of Mr. Bradley's, completely run down by previous owners, with shallow plowing, and frequent crops of rye. The course of cropping had been to plow the land four or five inches deep, as often as it would bear five to eight or ten bushels of grain to the acre, sow it with winter rye, but omitting grass seeds, and after harvesting the rye, leaving the land to cover itself with such vegetation as it could, whenever it could. Last year at this time, the land was covered mostly with moss, with here and there a few bushes and feeble grasses. Last November, it was plowed a foot deep with the sod and subsoil plow, and an entirely new soil brought up to the surface, fine-grained and salvy. In April last, it was dressed with 500 pounds of bone dust per acre, together with 200 pounds of Peruvian guano, to give immediate action to the newly-turned-up soil, then harrowed fine, and sowed with one and a half bushel of orchard grass, a peck of herdsgrass, a half bushel of red-top, eight pounds of red, and four pounds of white clover seeds to the acre, and the surface made smooth with the roller. Here, too, is a superior catch of grass, giving the land a very different appearance from what it had a year ago, and showing that much can at once be done for the improvement of such land.

The last field examined was a tract of some six acres, which Mr. Bradley is now plowing. This land has also been much reduced by shallow plowing, and frequent crops of rye. The sod and subsoil plow, drawn by four oxen, is turning the land ten inches deep, bringing up a different soil from the old surface one that has never before been exposed to the day. The plowing is done in capital style, no baulks or imperfections of furrow being anywhere allowed. About the first of September, a ton of bone dust to each acre is to be sown on the furrows, and also about one and a half bushel of winter wheat per acre, and the two harrowed in together. The sod and subsoil plow prepares a very level, mellow surface, and so cracked and opened withal, as to make a very superior seed-bed, in which the bone dust and seed wheat can be well covered by the harrow. Then one and a half bushel of orchard grass, a peck of herdsgrass and a bushel of red-top seed are to be sown to the acre, and the land rolled. In the spring, the land is also to receive red and white clover seeds—the design being to secure a thick sward of various kinds of grass. The land lying high, with a moderately rolling surface, it is thought that winter wheat may succeed well on it. The other two fields of old pasture, on which Mr. Bradley has applied 500 pounds of bone dust to the acre, have done so well, that he is inclined to try the experiment of a very heavy dressing of bone, and see if the land will return him a good crop of wheat, as well as an increased amount of pasturage over what could be realized from an ordinary dressing, and lasting for a longer period. The idea prompting to this generous usage is, that land will pay very much in proportion to what you invest in the improvement of its soil, or that where much is given to it in the shape of fertilizers and thorough cultivation, much may be expected from it in crops returned. The locality of this lot is withal so convenient to the barns, that it is quite desirable, on that account, to make it over into a productive pasture. Application has been made to Mr. John Johnston, of Geneva, New York, for the seed wheat. He is a very successful wheat-grower, and has several valuable varieties of seed, which he has been at considerable pains to procure and perfect. This is to me an interesting experiment, the results of which I expect to have something to say about hereafter in the *Farmer*.

It may be observed that the various fields spoken of in this communication, being free from uncommon roughness, or steep declivity of surface, are tolerably well situated for plowing, and are in the immediate vicinity of a village, where pasturage commands a high price. Under such circumstances, one can well afford to improve such lands in the ways above mentioned. Other circumstances may, of course, require variations from these modes of improving pasture land, or may, for the present, forbid attempts at improvement. Of that, each one must judge for himself; but as a general proposition, in the older settled districts of New England, investments for farming purposes made directly in the improvement of the soil itself, pay quite as well as the purchasing of more land, and adding it to the farm.

Brattleboro', Aug. 25, 1860. F. Holbrook.

A righteous man regardeth the life of his beast.

For the New England Farmer.

STOOKING CORN.

HOW TO DO IT QUICKLY.

1. Have a good corn-cutter.

2. Lay the corn, (2 or 4 hills in a place,) so that the tops of the second two rows will lie towards the tops of the first two, the tops of the fourth two, towards the tops of the third two, and so on. By throwing the left arm *over*, not under the hill, and bending it down slightly, one blow of the cutter will generally bring down the whole: and a large field may be levelled at short notice, far quicker than the stalks can be cut.

3. Take a small pole, about 3 inches through at the large end, 10 feet or so in length, light and dry; if a little curving, so much the better. With a 1 or 1½ inch auger bore two holes quite near the large end, so as to insert two legs, standing *outward* and *forward*, the rounding side of the pole being upward. Next, bore a horizontal hole about 2½ feet from the large end, into which a broken rake handle or other smooth stick may be run. Here we have a corn-horse all complete and ready for use. When the horizontal stick is in, we have four corners, around which we may set up the corn; 16 to 32 hills in a stook. Tie firmly with wilted suckers or small stalks, or, what is better, rye straw bands. Bend down the tops and tie a small band over them, to shed rain.

Now, draw out the horizontal stick; take hold of the horse just behind the legs, draw it along a few feet and run the stick in again, ready for another stook.

The husking may be greatly facilitated by *breaking off the ears* before stripping. By pressing the thumb and fingers firmly against the butt of the ears, and bending over with the other hand, one may acquire the habit of breaking them off, so that many ears will have few, if any husks left. The stooks need not be untied. By a little ingenuity at contrivance, one may fix a low bench 3 feet wide, or so, throw a stook upon it, sit down, with feet under the bench, begin on one side to break off, and make clean work as he goes; or, he may kneel down to the stooks as they stand, or lie on the floor. If possible, let the corn be *fairly glazed* before cutting, but if a cold September morning, which threatens a hard frost at night, finds a field standing, unglazed, I should prefer cutting and stooking, (with the wilted side inward,) to letting the frost take it. In such case, it will harden off better in the stook than in the field. E.

Framingham, Aug. 30, 1860.

HORSES.

We usually feed our horses too much; that is, the food is disproportioned to the labor they perform. We speak more particularly of our best horses—fancy animals, that stand in warm stables, blanketed, and taken out only occasionally for exhibition, rather than use. To keep a horse or other animal healthy, the carbon taken into the system in food must be proportioned to the oxygen taken in by respiration. Thus a man of sedentary habits, seated day after day in a warm room where there is little oxygen, can live on mush and milk, a little toast, or other light food, while the same man, in the Arctic regions, would swallow whale blubber with impunity. The excess of oxygen in the Arctic atmosphere requires an excess of carbon, otherwise the oxygen would consume the lungs, and produce pulmonary disease. If the food (or carbon) exceeds its due proportion, or is disproportioned to the oxygen, it is unconsumed, and is stored away in the form of fat, which induces acute diseases and premature death. Now, a fancy horse, that has little exercise, standing in a warm stable, blanketed, with little circulation of air, and consequently little oxygen, gorging himself at a full crib from day to day, requires an excess of carbon; his muscles are overloaded with fat—he becomes stupid, and sluggish, and very liable to acute diseases. —*Ohio Farmer.*

THE SEASON AND CROPS.

We have had, up to this time, Sept. 6th, no frosts to injure vegetation; in some low places there has been a little, but doing no harm. Frequent rains and warm weather have kept plants growing vigorously, so that their foliage is nearly as bright and luxuriant as in July. The "country never looked more attractive," is the remark of all who go out to see it. If the present hot days and warm nights continue a little longer, the corn crop must be safe from frost; as it now stands, it is so rank and juicy that a slight frost would injure it essentially. It appears to us that corn, generally, is not eared so heavily as in some seasons when we have what is called a good crop. It has a great growth of stalk, and many ears are set that cannot be carried through. Notwithstanding, the crop promises well; the present fine weather is probably increasing it at the rate of several thousand bushels every twenty-four hours in the State of Massachusetts.

WHEAT.—The attention called to this crop during the winters of 1858 and 1859, through the agency of Farmers' Clubs, has resulted in producing, we think, twice or three times the usual amount of wheat harvested in any one of many preceding years. The crop is also of excellent quality. We are informed that in some towns in Cheshire county, N. H., enough has been raised to supply the wants of the inhabitants. This increase of one of the staple articles of food may be fairly credited to the dissemination of books and newspapers devoted to agriculture, and to the discussions that have been held among the people in relation to farming matters.

The wheat crop in the Western States has been absolutely immense—indeed, it is inconceivable. Wisconsin will have *twenty-two* millions of bushels, after deducting losses in harvesting and cleaning up! California, we see it reported, will have *thirty-six* millions of bushels! The other Western States, with Virginia and Maryland, we have not heard from—but they must swell the amount to an astonishing aggregate.

Barley.—This crop has been excellent, though not cultivated very extensively in New England.

Oats have come in well, weighing, where grown on good soil, thirty-three pounds per bushel.

Rye has come in as about an average crop. It was badly winter-killed in many places, and the sharp spring drought kept it back, and reduced the crop considerably.

Beans have had ample time to mature, and the crop will be a good one, where they were not planted on *sand hills*.

Hay.—The grass crop has been abundant, as a general thing. In some localities the drought was severe, and the crop almost cut off; but such districts are comparatively small, and there will be an abundance of hay in New England.

Potatoes.—Crop not all harvested yet. If they do not rot, what in the world are we to do with them all! They are now excellent, large, and of fine flavor.

Roots.—Mangolds and ruta bagas look well now, and have a month or more to grow.

Fruit.—The apple crop will be abundant, and the fruit larger and fairer than it has been for many years. We hope our friends will not despair of getting a fair price for them, as when they are plenty it encourages shipping, and the price is usually as high as when the crop is small, and little or no shipping takes place. It is our opinion that all good apples, gathered and *put up well*, will bring a fair price.

Pears.—A fine crop, but it is said they are not so high-flavored as usual.

While, then, the "varied year" has been comfortable for man and beast, it has also been full of wonderful attractions and beauty. Spring covered the earth with flowers of exquisite hue, and form, and fragrance. Midsummer found it clothed in the richest drapery of twig and foliage, and now autumn is crowned with the substantial harvests which her sister months have aided in bringing to perfection!

In the enjoyment of such blessings, we need not wait for a proclamation from the Governor to set apart a day for thanksgivings; they should hourly rise, as freely as God's blessings have risen through the spring, summer and autumn to perfect the plants from which we must seek our comfort and support.

Sunlight in Houses.—The following fact has been established by careful observation: That where sunlight penetrates all the rooms of a dwelling, the inmates are less liable to sickness than in a house where the apartments lose its health-invigorating influences. Basement rooms are the nurseries of indisposition. It is a gross mistake to compel human beings to reside partially underground. There is a defective condition of the air in such rooms, connected with dampness, besides the decomposing paint on the walls, and the escape of noxious gases from pipes and drains. All school-rooms, especially, should be open to the sunlight, yet as a general rule, they are darkened like a parlor.

THE OLD GRIST MILL.

The grist mill stands beside the stream,
With bending roof and leaning wall,
So old that when the winds are wild
The miller trembles lest it should fall;
But moss and ivy never sere,
Bedeck it o'er from year to year.

The dam is steep, and welded green;
The gates are raised, the waters pour,
And tread the old wheel's slippery steps,
The lowest round forevermore;
Methinks they have a sound of ire,
Because they cannot climb it higher.

From morn till night, in autumn time,
When heavy harvests load the plains,
Up drives the farmer to the mill,
And back anon with loaded wains;
They bring a heap of golden grain,
And take it home in meal again.

The mill inside is dim and dark,
But peeping in the open door,
You see the miller flitting round,
And dusty bags along the floor;
And by the shaft and down the spout,
The yellow meal comes pouring out.

And all day long the winnowed chaff,
Floats round it on the sultry breeze,
And shineth like a settling swarm
Of golden-winged and belted bees;
Or sparks around a blacksmith's door,
When bellows blow and forges roar.

I love my pleasant, quaint old mill!
It minds me of my early prime;
'Tis changed since then, but not so much
As I am by decay and time;
Its wrecks are mossed from year to year,
But mine all dark and bare appear.

I stand by the stream of life:
The mighty current sweeps along,
Lifting the flood-gates of my heart,
It turns the magic wheel of song,
And grinds the ripening harvest brought,
From out the golden field of thought.

R. H. Stoddard.

The Okra Plant.—The consumption of this plant has materially increased within a few years. Mr. John Buckland, of Monmouth county, N. J., now raises seven acres per annum. When the pods are in a fresh state, they are used for soup, and give off a mucilage which enriches the soup materially, while the less soluble portions of the pod are softened together with the seeds, and produce an admirable potage. The gumbo of the South is made with this plant. The soup is always easy of digestion, and very nutritious. When the plant is suffered to ripen, the seeds are large and hard, and the amount produced is very great; these by being burned produce an imitation of coffee, scarcely inferior to the best Mocha, while the fibrous character of the pod strongly recommends it to paper-makers. It is perfectly evident to those who have examined it, that neither the aloe, the beech-wood, ordinary straw, or any of the substances now being made use of in place of cotton or linen for paper, sur-

pass it for this use; and we are surprised that it has not found its way into general consumption. —*Working Farmer.*

For the New England Farmer.

A VALUABLE TABLE.

I notice in the *Farmer* of July 26 an article under the above caption, which would be valuable if it was correct; but I find so much discrepancy in it that I am constrained to write.

When I was a boy I learned from Adams' old arithmetic that 268.8 cubic inches make a gallon dry measure, and on that supposition, the first box 24 by 16 by 28 inches, said to contain five bushels or one barrel, is correct if you call 40 gallons a barrel; but that is not the way we reckon barrels here. No matter—it is the boxes we are after now; all correct so far.

But the second box, said to contain half as much as the first, is of the same length and breadth and should be 14 inches deep instead of 12 inches.

The third box, 26 by 15.8 by 8 inches, said to contain 1 bushel, does contain over a bushel and a half.

The fourth box, 12 by 11.2 by 8 inches, said to contain 1 peck, does contain just half a bushel.

The fifth box, 8 by 8 by 4.2 inches, said to contain a gallon, is correct.

The sixth box, 4 by 8 by 4.8 inches, said to contain a half gallon, is 19.2 cubic inches too large.

The seventh box, 4 by 4 by 4.1, said to contain a quart, is 1.6 cubic inches too small.

Now I have my hand in, if you have room to spare, I should like to give a simple rule to ascertain the correctness of grain measures in the form commonly used for half-bushels, pecks, &c., that is, the round or circular form.

First, to find the area of any circle, multiply the square of its diameter by .7854, that is the decimal form of 7854-10,000, and the product will be the answer. And now for the half bushel.

Measure the diameter carefully in inches and fractions of an inch, (a carpenter's square will answer all practical purposes, but the Gunter's scale is better, because it gives the fractions in decimal form) then multiply its square by .7854 as directed above, and you have the number of square inches checked right out on the half bushel bottom, by which divide the number of cubic inches in half a bushel, and the quotient will be the required depth in inches and fractions of an inch. Now measure perpendicularly, and if not correct, cut down the top or move the bottom outward or inward. H. BRIGGS.

Fairhaven, Vt., Aug., 1860.

LICHENS.—And as the earth's first mercy, so they are its last gift to it. When all other service is vain, from plant and tree, the soft mosses and gray lichen take up their watch by the headstone. The woods, the blossoms, the gift-bearing grasses have done their parts for a time, but these do service forever. Trees for the builder's yards, flowers for the bride's chamber, corn for the granary, moss for the grave. Yet as in one sense the humblest, in another they are the most honored of the earth-children. Unfading, as motionless, the worm frets them not, and the autumn wastes not. Strong in lowliness, they neither blanch in heat nor pine in frost. To them, slow-fingered, constant-hearted, is intrusted the weaving of the dark, eternal tapestries of the hills; to them, slow-penciled, iris-dyed, the tender framing of their endless imagery. Sharing the stillness of the unimpassioned rock, they share also its endurance; and while the winds of departed spring scatter the white hawthorn blossoms like drifted snow, and summer dims on the parched meadow the drooping of its cowslip gold,—far above among the mountains the silver lichen-spots rest, star-like, on the stone; and the gathering orange-stain upon the edge of yonder western peak, reflects the sunset of a thousand years.—*Ruskin.*

For the New England Farmer.

NATURAL SCIENCE---PROGRESS.

MR. EDITOR:—I am the hearty advocate of science among farmers, especially the natural sciences in the field of which the farmer's labors are continually going on. Thirty years ago, however, it would have been next to an impossibility for a young farmer to acquire much knowledge, even of the most common and simple of these sciences. They were, then, in comparative infancy, and were so mystified with jaw-breaking technicalities, that the first view made them repulsive, especially to the young.

But investigation has brought many new things to light, and being seen, their beauty, loveliness and general utility are developed. The minds of learned men are becoming more expansive, so that what they see and admire they deem fit objects of sight and admiration of others. The botanist and geologist are bringing those sciences, not only to a general focus, but are adapting them to the capacities of the very young. So, too, with writers on the subjects of animal creation; and by making us acquainted with the nature and habits of the birds and beasts that surround us, they teach us that these, too, are not the enemies, but the friends of man.

I rejoice, most heartily rejoice, in this day of progress in these things. It augurs a good time coming for the general intelligence among men, in the things that surround them, and in which their labors and successes are intimately connected.

It has been urged as an objection to the introduction of these sciences into families and common schools, that no books were prepared, adapted to the capacities of such learners. This vain plea is happily yielding to some stubborn facts in the case. Gray's "How Plants Grow" is admirably adapted to the juveniles, and at the same time instructive to the advanced capacity. Hitchcock's "Elementary Geology" is a work with which any one can become familiar who is disposed to do so, and what is equally good, Messrs. Harper, of New York, have just brought out a highly illustrated work, prepared expressly for the young, by Dr. Hooker, of New Haven, on the "Natural History of Animals," which we heartily commend to the consideration of loving parents, accomplished teachers and all good boys and girls, both little and big, who wish to make their minds big-

ger and their lives happier by a knowledge of the varied objects of animate creation.

Doctor Hooker is certainly fortunate in his happy talent of making the subjects of his thought so attractive and understandable as this book assures us.

He, in the first place, classifies animals, showing the difference existing between them as classes. Then he takes up the sub-classes, or species, and last, the varieties, with the native country and habits of each—together with their uses in the economy of nature. He uses some technicalities, of course, but only just enough for novelty to the young reader, and these are so beautifully anglicised, that they make the work interesting. Some 300 engravings illustrate the work, and a series of questions at the close of each chapter are well prepared to aid inexperienced teachers, who may introduce it. I have read the work with much pleasure and instruction, and fully commend it for schools or for families. W. Baron.

Richmond, Aug., 1860.

For the New England Farmer.

BARREN GRAPE VINES.

Dear Sir:—In your monthly journal, page 331, of this year, there is an article entitled, "*Cause of Barren Grape Vines.*" Two drawings are given, one of an imperfect, the other of a perfect flower. There is one point on which information would be acceptable, of which, however, nothing is said directly, in the above named communication. *Is it ascertained that the impression of these barren flowers is radical and perpetual, or it is a result of immaturity, which time will remove?*

The point is one of importance. The late Rufus Clark, of this town, informed me that a vine which was then bearing several bushels of bunches of grapes was accounted to be barren for twenty-five years. It sprang from a seed, and was only saved from the axe because it made a handsome shade while it occupied no valuable room.

Another gentleman has fruit on a vine this year which for four or five seasons past has contented itself with flowering, and was called barren.

The small bunch of flowers sent herewith is from a vine, (at the Parsonage, in Brattleboro', which I occupy,) a very rank grower, short jointed, and generally attractive to the eye of grape-growers, but barren for four years. Its age is six. The flowers sent are forced out from cutting back too closely. They are flowers of next year properly. The point on which light is sought is, Do those vines which are for a time barren, have then imperfect pistils? Or are they always perfect, only lacking in vigor?

Until this point is settled, what shall prevent vines, which might ultimately be far better than the Concord, being thrown away as hopelessly barren? George P. Tyler.

Brattleboro', Vt., Aug. 27, 1860.

Remarks.—Mr. E. A. Brackett, of Winchester, is familiar with this matter, and we hope will reply.

Deep Plowing.—Mr. D. H. Kellerman writes to the Ohio *Cultivator*, "last spring I purchased a Columbus Double Sod Plow, and plowed a piece of sward ten inches deep, and it did the work to my satisfaction—it entirely buried the sod, and brought up about six inches of new black soil that never had been up. I anticipated a large yield of corn, but in that I was disappointed. The yield was not as large as on similar soil plowed in the ordinary way. I also plowed loose ground nine inches deep with no better result."

EXTRACTS AND REPLIES.

CRANBERRY CULTURE.

Mr. Editor:—As a portion of your columns are devoted to questions and replies, I would like to make a few inquiries concerning the culture of cranberries. I have an old bog meadow which I am at work upon, and have taken the top off, below all the grass, roots, &c. What shall I do next? Is it necessary for me to put on a top-dressing of some sort before setting out the vines? Is clean, white sand better than anything else for the above purpose? If so, why? Will sand which we can get from old pine hills answer? It is hard getting white sand at a convenient distance from the meadow. How would loam do? Shall I plant the vines this fall, or had I better wait until the spring? T.

Hudson, N. H., 1860.

Remarks.—If the meadow is composed mainly of decomposed vegetable matter, what is called muck, a top-dressing of sand, or even gravel, will be of essential service. The sand supplies *silex*, which means sand, to the plants, and probably benefits them as sand does grass, when applied to meadows—that is, supplies the stiffening principle, that hard surface covering which enables the plant to sustain an upright position. When sand underlies a meadow, we are inclined to think that it operates as a *strainer*, by passing off the surplus water, as well as supplying silex.

Set the plants this fall after growth has entirely ceased, or in April or May.

BUTTERNUT TREES.

In the last number of the *Farmer* I noticed the inquiry of "L. T. S.," respecting the bad effects of butternut trees on fruit trees. The remark was made to me some five or six years since that apple trees would not grow near a butternut tree, and I have ever since been looking for evidence in proof of the statement. I have found one case in point which looks very strongly in that direction. In an orchard set some fifty years since stands a large spreading butternut tree, and the apple trees for some reason give it a wide berth; as there are none standing within four or five rods in either direction, and those nearest are dwarfed, timid things, and appear as if they were enduring the frowns of the lofty butternut.

I am very much pleased that "L. T. S." has made the inquiry; for I am sure that the facts will be drawn out from the observations of your numerous readers.

I should have said above that the balance of the orchard stands in the order which it is usual to set trees. M.

Wilbraham, Aug. 30, 1860.

ABOUT MAKING PICKLES.

Can you, or some of your readers, inform me how pickles are prepared as they have them to sell in jars, or by the barrel? A. G. C.

Westboro', Sept., 1860.

CROPS IN NEW HAMPSHIRE.

The crops look well here—hay came in well, the drought not having much effect upon it. I. D. M.

West Windham, N. H.

Remarks.—The description of a new cheese press accompanying the above was so imperfectly written, that we could not clearly make it out.

AYRSHIRE STOCK.

I noticed lately in the *Salem Gazette* a carefully prepared statement of the milk products of two Ayrshire heifers recently imported by the Hon. E. S. Poor, of South Danvers. They were two years old in April, and then had their first calves. From the 20th of May to the 30th of June, on grass feed alone, they yielded four gallons of milk, each, daily, or nearly this. Their milk was said to be of very good quality, much like the milk of Jersey animals.

Perhaps the gentleman who lately asked for a comparison of the milking properties of these two classes of animals would like to examine these heifers of Mr. Poor. I believe they will be found worthy the attention of the curious in those matters, as I know his own Jerseys to be. *.

NORTHERN AND SOUTHERN CLOVER SEED.

I would like to inquire if there is any way by which the seed of Northern clover can be distinguished from that of the dwarfish Southern article? For the last six or eight years I have paid an extra price for Northern seed, but have obtained it only once, the rest of it all proving to be the small Southern article, getting dead ripe before the herdsgrass blossomed. J. H. C.

McIndoe's Falls, Vt., 1860.

REMARKS.—We have inquired of a gentleman who buys and sells large quantities of clover seed, and he says it is very difficult to distinguish the Northern from the Southern seed.

SAVING HUNGARIAN GRASS SEED.

In answer to "I.W.," of Clarendon, Vt., I would say, let it stand till the seed is mostly ripe, at which time the blades are usually about one-half turned yellow. When cut at this time and well cured, you will have a good crop of both hay and seed.

I think it best to thresh it right from the field. The seed and hay are very much inclined to heat, and should be closely looked to, till perfectly dry.

WILLIAM RICHARDS.

Richmond, Mass., Sept. 4, 1860.

EXTRACTING COLORING MATTER FROM MAPLE SUGAR.

Can you, or your readers, give a process of extracting the coloring matter from maple syrup so that it will be clear like honey? If so, they will do the public a favor. E. G. C.

West Rutland, Vt., 1860.

THE BEES AND THE MATHEMATICIANS.—Reaumur, the eminent French entomolgist, proposed to M. Konig, one of the ablest mathematicians of his day, the following problem:

Amongst all possible forms of hexagonal cells having a pyramidal base composed of three similar and equal rhombs, to determine that which can be constructed with the least expenditure of material.

The mathematician undertook the solution of this very beautiful theorem, and at last demonstrated that, of all such cells, that would require the least material the angles of which should measure, respectively, 106° 26′ and 70° 34′. M. Marraldi, another eminent naturalist, had in the meanwhile calculated, with as much accuracy as he was able, the real angles in the cell of the bee, and found them to be 106° 28′ and 70° 32′, leaving only two minutes difference between the calculation and the result of the measurement; and more recent researches, conducted with the delicate instruments of modern science, have shown even that slight discrepancy to be erroneous, and proved that the angles pointed out by mathematical research and those adopted by the insect laborer are precisely identical.—*Jones's Natural History of Animals.*

For the New England Farmer.

RUTLAND COUNTY FAIR.

MR. EDITOR:—Being called by business up to this State, it has been my good fortune to be present on the opening day of the Rutland County Agricultural Society, which is being holden at this thriving village, and I have thought I would give you my impressions in regard to it. The society have some forty acres enclosed by a substantial fence, which is admirably suited for the purposes for which it was designed, on which are built good, substantial buildings for the various uses of the society, together with that ever-present nuisance, a race-course.

Vermont has ever been famous for her good horses, and in the show to-day, Rutland county has done herself credit, the Black Hawk stock, I think, claiming its full share of attention. I would like to mention some very fine animals noticed, but stock and all articles are entered by number, and without the owner's name and residence attached, which makes it very inconvenient ascertaining the owners amid the bustle of a race course, where the Vermonters are especially proud of exhibiting their stock. The show of cattle was very good, mostly native blood, although some very good Durhams and Devons are on exhibition. My impression is, the Vermont farmers do not pay enough attention to their breed of cattle, and that the infusion of more Short Horn blood into their stock would be very much to their advantage.

The show of sheep was far below my expectations in point of numbers, yet there were some very fine animals on exhibition of the various breeds of French and Spanish Merinos, Leicester, and the various crosses between them. The Spanish largely predominated, and as far I could learn, are taking the preference among the majority of wool-growers. J. B. Proctor, of Centre Rutland, exhibited some very choice stock of Spanish Merino sheep, which to my mind were the best on the ground. One yearling buck in particular was the nearest perfect of any sheep I ever saw. He also exhibited ewes, ewe lambs and buck lambs, which are a credit to his skill as a breeder. Messrs. Farr & Rich also exhibited good sheep, and others whose names I did not learn. The show of dairy products and vegetables was good, but not superior. The show of fruit was very meagre, showing plainly that the Green Mountain boys pay more attention to their sheep than to their orchards. I leave for Addison County Fair to-morrow, and may give you a few notes in regard to it. W.

Rutland, Vt., Sept. 6, 1860.

REMARKS.—Thank you, sir—we shall be glad to get them.

ART OF THINKING.—To think clearly is among the first requirements of a public teacher. The faculty may be improved, like other faculties of mind or body.

One of the best modes of improving in the art of thinking is, to think over some subject before you read upon it, and then to observe after what manner it has occurred to the mind of some great master; you will then observe whether you have been too rash or too timid, in what you have ex-

ceeded, and by this process you will insensibly catch a great manner of viewing questions. It is right to study, not only to think, but from time to time to review what has passed; to dwell upon it, and see what trains of thought voluntarily present themselves to your mind. It is a most superior habit of some minds to refer all the particular truths which strike them to other truths more general; so that their knowledge is beautifully methodized, and the general truth, at any time, suggests the particular exemplifications, or any particular exemplification at once leads to the general truth. This kind of an understanding has an immense and decided superiority over those confused heads in which one fact is piled upon another, without the least attempt at classification and arrangement.—*Sidney Smith.*

For the New England Farmer.

FERTILITY OF MOUNTAINS.

Every man who has an eye to a good farm, will notice that from the land in the valley between two mountains, good crops are produced without manure. Ask the cause of this fertility, and the universal response will be, "the soil of the mountain is washed upon it, which causes it to reproduce largely." Look at yonder mountain! Is there any soil there to be washed down; if there was, why does it appear so sterile? My theory is different. In the warmer part of the season, the rocks are filled with water, and in the colder part of the season, the water, in the act of freezing, expands and tears the rocks asunder, so that on the commencement of a thaw, large pieces become detached and roll down into the valley below, when they break to pieces, are decomposed, and finally dissolved into a mould.

Look at the fruitful valleys of Switzerland, and no one will doubt, but the gradual decomposition of the mountains furnishes food for the plant in the valley. Is there a chance for us farmers to learn a lesson from nature? I say, yes; not many years will elapse, before some one will discover the art to hasten the decomposition of the rocks in our mountains, and we shall be led to look at the wisdom of God in causing them to be formed. On the Faulhorn, which is situated in the south of Europe, and rises 8000 feet above the level of the sea, on removing the snow, and after penetrating the ground some feet, is found a black mould of a rich quality. This valuable deposit was evidently derived from a decomposition of the strata of black lime-stone rock. The mountain torrents, when swelled, carry this deposit to the lowland, which accounts for its extraordinary fertility. In taking a birds-eye view of the various countries, it will be found that the sustenance furnished to the human race, by an all-bountiful Providence, has been wisely adjusted to meet their wants in every clime. Take the condition of the Esquimaux; his only food is the seal and walrus, which abound in fat. It is a substance exceedingly rich in hydrogen, and in the body eminently combustible, and weight for weight, when consumed in the blood, will furnish more heat than any other substance which can be taken for food. S. P. M.

Cape Elizabeth, Sept., 1860.

For the New England Farmer.

WINTER AND SPRING WHEAT

Messrs. Editors:—I noticed an article in the *Farmer* from the pen of H. Poor, Brooklyn, L. I., under the head of "Information about Winter Wheat," in which he says he never has despaired since the commencement of his own experience, that New England would in due time raise all the wheat necessary for her rural population, and more or less for her seaboard and inland cities.

I heartily concur with him in this, but when he says that winter wheat is a much safer crop than spring wheat, I say it may be in his vicinity, but I think that for most of New Hampshire and Vermont the spring wheat will generally average more to the acre by as much as twenty-five per cent. Having just harvested, threshed and marketed my spring wheat, I will give you a few statistics in relation to my crop this year. I sowed four bushels of Italian wheat on 2½ acres, the 12th day of April, from which I threshed, Aug. 22d, 114½ bushels, making 45 bushels to the acre! The ground was manured on the turf, broken up, and planted to corn the spring of 1859, and plowed again in October, after the corn was harvested.

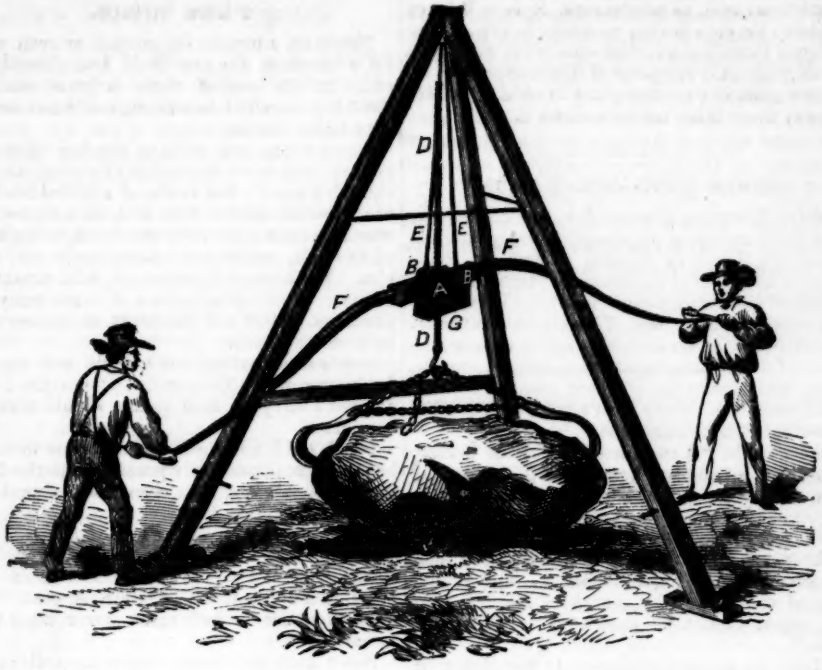
I sowed another piece of 4½ acres the 18th of April, and sowed eight bushels seed on it; the ground was a side hill pasture, planted to corn last year, and plowed again last fall. This last piece has never been manured at all. Threshed Aug. 21st, 102½ bushels, averaging over 22 bushels to the acre. I sold my wheat for eight shillings per bushel. Were it not making my article too long, I would give you the exact cost of raising said wheat, as I keep a daily journal, and can show the exact cost and manner of preparing ground, &c. R. H. Simonds.

Hartford, Vt., Aug., 1860.

Remarks.—Please give us the cost, and any other information about the culture of wheat. Do you soak, or prepare the seed in any way?

FACTS FOR POOR FARMERS.

"Those farmers who have most difficulty to make both ends meet, always plow most and keep most stock. Now these men take the true plan to keep themselves always poor, because their crops and stock are always poor and bring little." So writes John Johnston, in a letter to the Secretary of our State Society; and he thus illustrates his statement: "It is good profit to raise 300 bushels of wheat from ten acres, but when it takes thirty acres to raise that amount, it is raised at a loss. So it is with cattle and sheep—you will see the thinking farmer making four-year old steers worth from $60 to $80 each, and his neighbor's at the same age not worth over $25 to $40." His advice to the latter is, "if his land is exhausted, he should plow no more than he can thoroughly manure. Seed with clover and grass, and let it rest, and that field will not only pay well for tillage, but it will furnish manure (if rightly managed) to make another field of the same size, rich also." And then keep it rich, do not run it with grain until again exhausted, or "the latter end of that land will be worse than the first."—*Country Gentleman.*



BATES'S STUMP AND ROCK LIFTER.

We present our readers this week a cut and description of this machine, which, for simplicity of construction and economy of power, exceeds any machine for the purpose which has ever come under our notice. It is the invention of Mr. Caleb Bates, of Kingston, Mass.

It consists of a rocking head A, supported by knife-edge trunions B B (like the bearings of a scale-beam,) resting in the eyes of the hangers E E. A double rack-bar, D D, passes through the centre of the rocking-head, with a hook at its lower end. The levers, F F, slip into square sockets in the rocking head to be thrown down when the machine is not in motion. Within the head is a pair of pawls, in the form of square links, crossing each other outside of the rack-bar. Clearly shown in Fig 2.

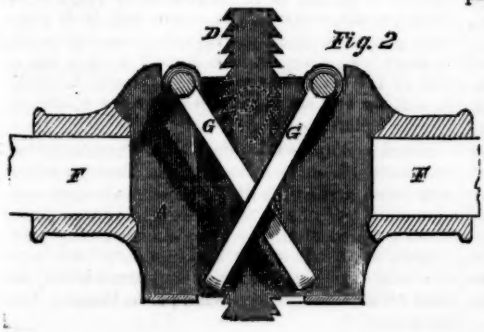


Fig. 2

There are also guides to the rack-bar, not shown. The whole is suspended in a tripod of poles or joists, fourteen feet long. Two pieces of spruce joist, four by five inches square, with a strap of board bolted on them; and one stick four by six inches, having iron braces hooked into it from the others, as shown above the machine. A pin in each leg to carry it by, and strongly cleated pieces of plank to throw under the feet, and it is ready for use.

When the hook is fast to the object to be lifted, the operators work the levers up and down, and the pawls engaging alternately with the racks on opposite sides of the bar keep it in continuous motion. As the head rocks, the relative position of the working parts changes, producing a progressive power. For, as the operating pawl approaches its culminating points, its journals approach a plane which intersects the points of contact with the rack and bearing edge of the trunions; the lifting power increasing from the commencement to the termination of each vibration.

To reverse the action of the machine, a tongue of steel, G, is tipped up. Then with the same vibrations of the lever the weight will descend gently, with the same speed that it rises, until the hook is loose; then, grasping the rack-bar with one hand, with the other spread the pawls, and the bar drops to any point, or entirely out if desired.

The two men stand sixteen feet apart, and exert the force of two hundred men on the rock, stump, or other weight to be lifted.

There is not a pound of power lost, for there is no friction; and, as can be seen, it is a balance machine, the men having no levers to lift. Three men can carry it about with ease when the levers are slipped out. All parts of this machine can be thrown apart in a moment, and as quickly put together; there being no bolts about it.

HONEY DEW---WHAT IT IS.

In any European journal, it would create surprise if the nature of the so-called honey dew admitted of a doubt or dispute. Starch or grape sugar is an essential substance of plants, as much as carbon is, of which sugar is formed in conjunction with acids and salts. Flowers and fruits contain this sugar in an eminent degree, as also the juices of the maples, sugar canes, millets, grasses, beets, and thousands of other plants. Animal blood receives its sugar from plants, as it is a life ingredient of both kingdoms.

Liebig says: "A surplus of saccharine matter, more than leaf and bud consume, will be exuded upon the surface of the leaves and bark. Certain diseases of trees and plants, the so-called Honey Dew, are obviously produced by a disproportion in the quantity of furnished nitrogen free, and nitrogen containing nourishments. The exudations of sound, healthy plants of mannit, gum and sugar, cannot be attributed to any other cause."

"This case appears analagous to the digestion in the human organism; if, to every part of the body, there shall be restored what it loses by respiration and secretion, there must be offered to the organs of digestion a certain proportion of nitrogen free, and nitrogen containing substances, accompanied by certain mineral salts, which metamorphose them into blood. Is the quality of the offered nitrogen-free substances in surplus, they will then be either used to produce fat, or they go through the organism unaltered."

So far says Liebig—besides, it is well-known that saccharine matter is not of a volatile nature, that the air cannot contain it in solution—how then can it rain or dew down from the atmosphere even upon the dusty ground? The days of the Jews, when they imagined that manna, or mannit, fell from heaven for their especial use and merit are past; that same mannit or gum exudation of the mimmosa and other plants is found and gathered yet in great quantities in the same and other similar climates of the globe, so the honey dew or the exudation of sugar. Bees do not produce one atom of honey, but are only the carriers of the starch sugar exuding from plants and their fruits. The so-called honey dew is in substance the same in the flower as it is on the leaf. Bees and myriads of other insects lick it up and exist on it. That rain washes it from the leaves is very plain, as water dissolves sugar. Give the bees plenty of honey-dewed foliage, and they will make plenty of the best honey without sipping a single flower.

The fibre called silk is in the mulberry leaf; the milk and cream of the cow, the oily parts of the grass, clover and herbs she eats, as is the wool on the sheep; or the honey the sugar of plants. The animal body only digests them, thereby complicating certain combinations of simple elements. —*Valley Farmer.*

For the New England Farmer.

FARM TOPICS.

Never set a post in the ground, or even stakes for a common fence, without first charring the end. In this practice there is great economy; there is generally brush enough at hand, and the boys like a bonfire.

Never break your colts to wearing blinkers, if you would have a less number of shying, contrary, skittish horses. The rustle of a leaf at his heels, or a piece of paper, in fact, all sounds from objects which he cannot see or comprehend, being blinded as to all, beside and behind, startle and alarm him. Blinkers or blinders are false ornaments, treacherous and dangerous, and cause many fatal accidents. Why not hoodwink the young steers in breaking them?

Never use anything but a chain and standard for tying cattle. The comfort of the tired oxen and cows carrying their young, should always be considered.

Never build your grain bins of any wood but hemlock. It is positively proof against the depredations of rats and mice, who never forget their best friends, the farmers.

Never get up your winter's wood to be chopped, split and thrown into a pile, and lie through the rains and drizzle of the spring months, and then house it at a loss of ten or fifteen per cent. Without loss of time have it under cover when ready for use.

Never keep your winter apples in a cellar where there is a constant opening and shutting of doors. Apples require an even temperature to keep sound. A dry side-hill cellar is best.

Never despair of getting a crop of winter wheat on light, plain, warm land, even if sown as late as the 15th or 20th of this month. See that the seed is well prepared in salt pickle and ashes, and put in two to three inches deep. Prepared in this way, it will come up the fourth or fifth day, if merely harrowed in. H. Poor.

Brooklyn, L. I., 1860.

TOMATO KETCHUP.

A correspondent recently inquired how to make tomato ketchup, and we insert the following for his benefit:

Take ripe tomatoes, and scald them just sufficient to allow you to take off the skins; then let them stand for a day, covered with salt; strain them thoroughly to remove the seeds; then to every two quarts, three ounces of cloves, two of black pepper, two nutmegs, and a very little Cayenne pepper, with a little salt; boil the liquor for an hour, and then let it cool and settle; add a pint of the best cider vinegar, after which bottle it, corking and sealing it tightly. Keep it always in a cool place.

Another Way.—Take a bushel of tomatoes, and boil them till soft; squeeze them through a fine wire sieve, and add half a gallon of vinegar, one pint and a half of salt, two ounces of cloves, quarter of a pound of allspice, two ounces of Cayenne pepper, five heads of garlic skinned and separated; mix together, and boil about three hours, or until reduced to about one-half; then bottle, without straining.

FARM WORK FOR THE AUTUMN.

In the successful management of a farm it is important to do the work at the *right time*, as well as in the right way. Indeed, this essential point is so sadly overlooked in many cases, that the profit that might otherwise be obtained is mainly lost. The seasons seem to have changed considerably, and if they have, our operations must change with them,—we must do the work when the elements and other circumstances will permit, even if we break through the old practices to which we have been accustomed. Within the last ten years, among good farmers, much of the work that was formerly done in the spring has been done in the fall, and in consequence of this the whole summer labor has been greatly facilitated.

For several years past the months of October and November have been sufficiently mild to allow almost any farm work to be done as well as it could have been in May or September; and, occasionally, as late as the middle of December, most of the out-door work of the farm might have been performed with comfort and profit. Let us suggest, then, some of the things that seem to call for attention in the fall.

CUTTING BUSHES.—A vast amount of labor is annually expended in New England in cutting bushes on pasture lands, where they are usually left to decay by gradual decomposition, in the way of the cattle, and unsightly objects to the eye of the neat farmer. These bushes are cut in August, under the probability that they will not start again so readily as if cut at any other time. But August is a busy season—much haying is left undone, in low grounds; weeds are to be looked after, and the stalks in the corn field are to be cut; the early potatoes, turnips, apples, and other things are to be marketed, and many matters are to be attended to which have been a little neglected during the busy days of haying. Many pastures have probably been cut over annually during two or three generations, and the only thing gained is in the bushes themselves,—they have taken deeper and deeper root every year, until they have nearly exterminated the grass, left the surface covered with innumerable stubs, and a thick coating of mosses in infinite variety.

The question we desire to ask is this: If the bushes are cut on a piece of pasture land twice or three times in a year, the stubble burned on the places where they stood the thickest, and the ashes spread upon the grass-producing spots, will not such a process exterminate them in three or four years? We are told that it will, and that next to plowing and thoroughly reclaiming, this is the best method.

The operation of DITCHING and DRAINING may usually be done with comfort and advantage between the middle of September and the middle of November. So may that of RECLAIMING MEADOWS. In this labor it is of the utmost importance that the first step shall be to draw off the water and leave the surface free for man and beast to work upon; and it should be taken off some ten or fifteen inches below the surface, so as not to interfere with the plow, if that implement is used. The cost of reclaiming a meadow is sometimes doubled by not pursuing this course,—and there is scarcely any greater discomfort than working in a black mud saturated with water, where men and teams are occasionally floundering, and strained to little purpose.

On rocky farms, the autumn affords an appropriate time to lift the large stones to the surface, and set them on small ones so that they will not freeze to the ground, in readiness for hauling away on the snow in the winter. In this course a treble advantage is derived; the cost of labor is not so much as in summer, and twice or three times as much weight can be removed in a given time on the snow as on the bare ground, if the stones are so large as to make it necessary to remove them on a drag.

PLOWING is also another important work appropriate to the fall. Sward land, intended for corn or potatoes, derives great benefit from fall plowing. It covers up a large amount of grass and roots that commence the process of decay, and become serviceable to the future crop, while the fine soil laid up receives valuable elements from the atmosphere, and the frosts of winter pulverize the particles and destroy some of the cut worms that are exposed. The teams, also, are generally in better condition to labor than they are in the spring, and the work, being done, is off the mind, and leaves it free to act on other matters.

TOP DRESSING is another item worthy of especial attention. Some persons do this on mowing fields immediately after the grass is cut; where this is done there is not only usually a second crop, but the grass retains its roots for many years, and yields annually abundant crops. But few persons, however, think they can afford the time at such a season for that work. Where there is a special objection to plowing land, this course is certainly a good one.

MANURES.—Every care should be taken before the ground closes up to provide loam or muck to sprinkle on the winter heaps of manure, so that none of their nutritive properties may be lost. This saving is not the only gain, for the whole barn and fodder will be sweeter, and the stock kept more healthy by preventing the escape of the ammonia and other gases from the manure heaps.

The Garden.—This should be plowed or spaded and manured in the fall, and the mind generally made up as to where the early corn and cucumbers, the peas and asparagus, the beans, lettuce, early potatoes and squashes shall be planted, so that in the spring there is no engineering to be done; nothing but this: "Here are the seeds for this square and that;" and they are quickly deposited in the rich, mellow soil, made light and seasoned by the fermentative power of the crude manures dug or plowed under in the fall.

We have suggested only a few things—there are many more that these few may suggest to the mind of the systematic farmer. It is pleasant and encouraging to go forth in the spring and find so much of the new year's work commenced; it is inspiring, and gives one a start that he feels all through the season. So let us take time by the forelock, and do all things at the *right* moment, and do them well.

For the New England Farmer.

SLATES AND LIGHTNING.

In your issue of August 25, 1860, I find "Practical Slater's" theory so much at variance with my *experience*, I am tempted to give a little of that.

Six years ago I was building an addition to the house I then occupied, and had covered the new part with slate; soon after it was struck with lightning, near the end next the old part of the house, breaking only two or three slates, and passing down the corner part, shivering to atoms an umbrella which I, but a moment before, put there, and prostrating my wife and myself. Had it not been for the timely assistance rendered by my hired man, (and the blessing of Providence,) who supposed life to be extinct with me, I probably would not have been here to answer now.

Soon after the above occurrence, we had two lightning rods put up, and I think that they were struck with lightning in the month of June last. All of which, and a vast amount of shocks by electricity, have happened within ten or twelve miles of very extensive slate quarries in this county, that have been constantly worked for a number of years previous to the above occurrences.

E. G. Chatterton.

West Rutland, Vt., Aug. 31, 1860.

Aconite a Remedy for Massachusetts Cattle Disease.—Hon. Adam Ferguson, of C. W., writes Col. B. P. Johnson, of New York: "A friend of mine in Scotland, an *amateur veterinarian*, told me he attended Prof. Dick, in his rounds, when the disease, some years ago, was raging in Scotland, especially in large dairy establishments. My friend, D. Henderson, is Professor of Pathology in the University of Edinburgh, and is in high medical practice. He assured me that Aconite was used as a specific, if given in time, *before* the lungs were seriously affected, and had saved scores of valuable cows."

For the New England Farmer.

IS THERE PROFIT IN FARMING?

Many thanks, Mr. Editor, to your Chelmsford correspondent, T. J. Pinkham, for his article, some months ago, on the profits of farming. I think it has been productive of much good in the many able and conclusive answers it has elicited. And yet there is one phase of the question which has hardly been touched upon by those who have undertaken to answer that article.

What is *profit* in farming or any other occupation? Is it truly estimated by the number of dollars above expenses which it brings into the pocket? To be sure, it was only in regard to *money* profit that Mr. P. argued the case, and those who have attacked his arguments have met him mainly on that issue; but as, in reading the *Farmer*, since that article appeared, my attention has so frequently been called to the question, "is there profit in farming," your readers have naturally been led to look at the question in its full and literal meaning.

I suppose that no one will object to the position that the greatest good is the greatest profit, and that one occupation or calling is more profitable than another, inasmuch as it is productive, in all its bearings, of the greatest amount of happiness. I will not assume that every one may find in agriculture the greatest profit; far from it; all cannot be farmers; and fortunately, in the divine arrangement, the tastes and capacities of men are widely varied; but let any one who has been familiar with the residents of almost any of our farming towns, for the last twenty years, look up the history and circumstances of those who have wandered from their farms for other occupations, or encouraged their sons to do so, and I think the result will show that while a few may have bettered their condition, the great majority have *flatted out*, and are now mere *dependants*, instead of substantial yeomen, as formerly.

A man with a snug farm, though saddled, perhaps, with a debt of a few hundred dollars, yet in the prime of life, in good health, with a family of boys beginning to assist him, and promising substantial aid in the future labors of the farm, it would seem, might congratulate himself on the prospect of enjoying, in a large measure, the real blessings of life. His own sons can now gradually take the place of hired help, and he can plan and execute improvements on the farm.

With room enough to keep all the family profitably employed, he can keep them with him, and they can have a home and common school education, chiefly under the eye and influence of their parents. Is there not *profit* here which dollars and cents cannot estimate? Let parents, thus happily situated, as I have described, experience, for one short month, the trials, anxiety and grief of some, whose business, though yielding them a large return of moneyed profits, yet brings their children into temptations which open up to them the flood-gates of ruin, and they will realize more fully the profits of a country farm.

It is sad to notice the change which has come over families. And the process by which it has been wrought is plain. The boys had no relish for farm work. One must be a merchant's clerk; others find employment in shops or factories; and one, loving his book more than work, must be

supported at college. The parents, now in the decline of life, must buffet its stern realities alone. With their own hands, or the aid of hired help, they are trying to secure the annual crops. All plans for "improvement were long since given up. They have no aid from their children, and little of their society. The clerk, perfumed with musk, occasionally comes home to rusticate; the shop-boys, in their liberal patronage of the livery-stable, may sometime, especially when the fruit and other farm luxuries are in perfection, ride over and see "the old folks," and the student also comes home at vacation for a fresh supply of money, and to tax anew the physical energies of his mother in replenishing his wardrobe.

The farm is now for sale, and these parents will soon, no doubt, break the life-long ties of farm and neighborhood, and spend the evening of their days elsewhere. Such, Mr. Editor, is a process which is largely going on in many of our country towns; can nothing be done to stay it?

Royalston, Sept. 6, 1860. J. WOOD.

REMARKS.—We hope so. Your article is a good pioneer.

For the New England Farmer.

"MARRYING A FARMER."

I see that your "Farmer's Daughter" has been answered by some abler pen than mine. When I read the article from the New Hampshire young lady, I felt a strong desire to answer her through your columns, but this has been so well done, that I only wish the privilege of adding a few words.

There is too much shrinking from what is called hard work—the household duties of a farm-house. I doubt whether such labor kills as many as the late hours, waltzing, high living, and other excesses of fashionable life.

It is not labor, the exercise of the muscles, that makes us grow old so fast; it is the constant worry and fretting at the real or fancied disagreeables of our daily life. We desire to dress beyond our means, to have a piano, and rich parlor furniture, or a carriage, forgetting that the real happiness of life does not lie in these things. No, nor in getting a rich husband either. I say, my dear "Mountain Sister," don't trouble your head about this last matter at all. Do your duty as a farmer's daughter, take some of the care and labor from that toil-worn mother, who has perhaps had more than her share. It is no strange thing now-a-days for farmers' daughters to sit in the parlor with needle work, wishing they had a piano or richer clothing, or that some wealthy gentleman would happen along and bear them off to a city life; while their mothers are making cheese or butter in the kitchen. Now, a far better way would be, to enter at once with energy and will into all the minutiæ of farmer-life—interest yourself in your father's labors out of doors; in the crops, in the cattle, in fruit-growing. You may suggest improvements, but at any rate, you will make home pleasanter to those who toil for you.

If you really desire an education, you can obtain it. There are more ways than one. Remember Miss Lyon. If you want more money, you can have it. If you really don't know how to obtain it, I will some day give you a bit of personal experience.

If you want a husband who will love, cherish and esteem you till death, you can have one. "How?" do you say? Ay! that's a secret, which I will reveal, if you'll promise never again to refuse a farmer, because you will have to work so hard.

A. E. P.

STATE FARM AT TEWKSBURY.

On Tuesday, Sept. 4, we made a visit to the State Alms-House at Tewksbury, to look at it as a whole, but more particularly to look at the farm, having heard that some striking improvements had been made upon it. Before visiting at the barns, stock and fields, we passed through nearly all the rooms of the buildings, and found them in admirable condition. They were clean, sweet, and orderly. The bedding, everywhere, would be inviting to a tired person of any class. It was white and whole, and the floors, furniture, and walls of the rooms, were all bright, notwithstanding the average number of the family is *seven hundred persons!* In the kitchen, the cooking is chiefly done in four large kettles, heated by steam. Two of these contained soup in preparation for dinner, and another potatoes. In one corner of the kitchen was a grist-mill at work, capable, we should think, of grinding ten or fifteen bushels of corn per hour, and propelled by a small engine in the boiler house. Adjoining the kitchen is the bakery, where *five* barrels of flour are made into dough for one baking. A batch had just been drawn from the oven as we entered the room; it was light, sweet, and of a fine color. We visited, leisurely, every part of the establishment, and found each department testifying to the neatness and systematic management of the Institution.

The Superintendent, Capt. T. J. MARSH, informed us, that when he entered upon his duties there, only two cows were kept upon the farm, which consists of one hundred and thirty acres; that the bills annually paid for milk amounted to about $3,500, and that the supposition of the managers of the House had been, that milk could be purchased cheaper than it could be made on the farm. This, however, was not his opinion, and the consent of the Inspectors being obtained, he has purchased cows from time to time, until he has *thirty-two* in the stancheons, and as a whole, it is as fine a herd as we have seen during the year. They are not fancy cows, and of no particular breed, but have been selected with regard to age, size, and good milking qualities.

About one-half the farm is made up of light plain land, such as often receives the name of "pine barrens," and the other half is of granite formation, a little elevated, springy, rocky, and covered with bushes, nearly as repulsive as any lands we have in the State. The sandy lands had not been improved so as to produce permanent

crops of grass, and the higher lands had not been reclaimed at all,—so that very little fodder could be cut to sustain the stock. Eighty tons of hay were, therefore, purchased last year, at a cost of $16 per ton, amounting to $1280; and yet, under this disadvantage, the Superintendent finds he can make the milk cheaper than it had been purchased. He is also able to use a larger quantity, and of better quality of milk than when it was brought to them from considerable distances. Beside the *thirty-two* cows, we found six pairs of noble oxen that are constantly kept at work in pulling stumps, stones, carting manure and the materials for making it, plowing and getting the land into grass, and doing the ordinary team work, such as hauling coal, &c.

By sowing oats, millet, fodder corn, &c., and by careful and systematic attention in feeding, the Superintendent is enabled to furnish food for this large stock through the summer, and keep them all in excellent condition. The oxen and cows were in good flesh, and some of them in each class were good beef, although giving milk, or daily in the yoke. Much of the sandy land is covered with roots for winter feed, or will produce its two crops this season, while the teams, with all the other force he can spare, are subduing the hard land, so that in less than five years, with the manure from this large stock and the well-directed labor in preparing the land for it, hay enough will be cut to supply the place of all that he is now purchasing! Beside the neat stock on the farm, there are three horses kept and some *three hundred swine.* The manure from this large stock, and the sewerage from the buildings, properly managed, may soon bring the whole farm into the condition of a highly cultivated garden.

The feed of the cattle is varied both in summer and winter, by giving them various green crops in the summer, with a little grain, and in winter by cutting the hay and mixing with grain or roots and feeding occasionally upon long hay. About *two* thousand bushels of potatoes will be raised this year, and some *three* thousand bushels of carrots and other roots.

Mr. Marsh had just finished a new barn, 40 by 60 feet, with 20 foot posts, with a cellar under the whole 9½ feet in the clear, with a cement bottom. Every part of this barn was built, we understood him to say, by the labor of the Institution, with the exception of the slating. This barn is intended for *storing purposes,* and not for stock, and for such use is a model building.

The farm greatly needs *pasture* lands, so that a portion of those now devoted to green fodder may be set in permanent mowing fields, and as there is such land within a hundred rods of the buildings, and adjoining the farm, we hope the State will supply the deficiency. A farm with only 130 acres is not sufficient for a family numbering 700 persons, many of them able and willing laborers.

What struck us pleasantly on the premises were the quietness and order that everywhere prevailed; every person knew his duty, and certainly seemed to be interested in its faithful discharge. The Inspectors are, Messrs. George Foster, of Andover, Dana Holden, of Billerica, Stephen Manson, of Lowell, and Thomas J. Marsh, Superintendent.

We congratulate His Excellency on these judicious and happy appointments, and the State in the possession of such skilful and faithful officers.

EXTRACTS AND REPLIES.

BARRELS AND BUSHELS.

In examining your valuable table in the monthly *Farmer*, page 400, I find some very important mistakes, or else I make some in casting.

24×16×23=10,752 the dimensions for a barrel of 5 bushels, (your figures say) but I suppose you mean 3.

10,752÷3=3584, the number of inches in a bushel.

24×16×12=4608, number of inches in a half barrel.

4608×2=9216÷3=3072 inches in a bushel.

26×15.8×8=3286 inches in a bushel.

12×11.2×8=1075×4=4300 inches in a bushel, so that you see that it makes quite a difference in the number of inches in a bushel. The figures stand thus:

Dimensions for a barrel	3584	to the bushel.
Dimensions for one-half a barrel	3072	" "
Dimensions for a bushel	3286	" "
Dimensions for a peck	4300	" "

Now the question is, which of the dimensions is right, if any? You do not tell us whether your boxes will hold so much grain or apples and potatoes. I suppose you must mean heaped measure.

Methuen.

N. B. Will not a box 18¼ inches square and 8 inches deep contain a bushel?

Remarks.—We found the table referred to in one of our exchanges, and supposing it correct did not test its figures, as we otherwise should. The English bushel contains 2150.42 cubic inches,—this is the bushel referred to in the table, and our correspondent will see that the figures for the barrel are right, allowing it to hold 5 bushels. A tierce would be the proper name for it. The box for the half-barrel, (or tierce,) should have been 14 inches deep instead of 12. The box you suppose, will contain 2738 cubic inches.

THE WHIP-POOR-WILL.

Mr. Editor:—In your terse "Talk about September," in speaking of the changes of the season and the ceasing songs of Nature's minstrels, you say, "The whip-poor-will is not heard much after July comes in." Do they usually cease their nightly carol on or about July in Masssachusetts? Here in Maine, this year being the first time observed, in 44° 90′, their song was kept up till September as merrily as ever, with short interruptions in the last part of August. Where they go to, and when they leave different places, would be information thankfully received from you and your correspondents by many lovers of birds. Let us all be more observing of birds and communicate what we learn. O. W. True.

Elm Tree Farm, Me.

Remarks.—Nuttall, in his admirable "Manual of the Ornithology of the United States," in speaking of the Whip-poor-will, says: "After the period of incubation, or *about the middle of June,* the vociferations of the male cease, or *are but rarely given.* Towards the

close of summer, previously to their departure, they are again occasionally heard, but their note is now languid and seldom uttered; and early in September they leave us for the more genial climate of tropical America, being there found giving their usual lively cry in the wilds of Cayenne and Demerara."

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CROPS IN MINNESOTA.

As you are interested in agricultural matters in all portions of our wide country, I will say a word in reference to the farming interest in this region.

The farmers are now in the midst of their wheat harvest, and all unite in saying that the present ingathering is by far the most abundant they have ever had in this region. Indeed, it would be a very difficult matter to find any land which seems so well fitted by nature to yield an abundant increase of small grains as this. A soil of limestone formation, just as rich as nature could make it, seemingly, cannot but reward the farmer with a hundred fold increase for his labor bestowed upon it. It is a wonderful soil for producing potatoes as well as wheat. One man assures me that last year he raised no less than sixty bushels of potatoes from one-half bushel of seed. Did you ever hear of such a yield before? His mode of planting was to cut the seed potatoes into small pieces each containing one eye only, and planting each piece by itself. The weather here is unprecedently cold, now; I hear of frost in low places. The corn has not grown any the last week or two, on account of the cold weather. EDWIN TEELE.

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FROST IN THE FULL OF THE MOON.

There was a frost in this vicinity on the nights of the 2d, 3d and 4th inst., sufficient to kill the corn and potatoes in many places. Your Springfield correspondent, (please insert the initials of Dr. Allen's name, I forget them,) in his interesting letters to the *Farmer* last winter, staggered my previous opinion in regard to the frosts in the full of the moon. I must watch him and the frosts hereafter, a little more closely.

To set the matter right, is the frost as frequent on any three nights of the month of September, as on the same number of nights at the full of the moon? I find it hard as yet to decide in the affirmative.

Bethel, Me. Sept. 6, 1860. N. T. TRUE.

REMARKS.—The initials desired are "J. A. A."

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THE WHEAT CROP IN MAINE.

This crop has not been as good as it is this year for ten to fifteen years, and many old settlers say it has not for twenty; but as to this I cannot say. There has been scarcely a failure of a remunerative crop where it was sown in March and April, and in fact, I have not seen or heard of a single piece sown thus early but filled well and had no midge to injure.

In Franklin and Somerset counties, I have seen a few late-sown fields that were injured by rust and the weevil or midge, considerably. It was easy to stand by the edge of different pieces and select heads containing fifty kernels of perfect grain, each, where it was sown early. Farmers are making preparations to try its cultivation much more extensively. O. W. T.

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THE CROPS—HAWTHORN HEDGES.

There has not been in this town, for many years past at this time of the year, the appearance of a better incoming crop of farm produce than there is now. And although the hay on both the uplands and intervales has not been quite so much in bulk as usual, it will, I think, be more than made up in the extra yield of corn, oats and barley.

Have any of the readers of the *Farmer* ever tried to raise a hedge from the planted berries of the common Hawthorn (*cratægus*)? If they have, with what success? JOHN C. GITCHELL.

Boscawen, N. H., Sept. 7, 1860.

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ADVANTAGES OF A MOWING MACHINE.

Some of your readers may be pleased to hear a brother farmer's experience of a mowing machine. The season previous to my buying a mower I paid nearly one hundred dollars for hired help to get my hay. The season after I bought a mower I paid fifty cents for help above what I mowed for my neighbors. The second season I paid a man thirty-six dollars for work in haying, did my own mowing, and mowed for others, and had forty dollars left! This season grass was very light, and I had but little to cut, but I get thirty dollars clear. Cost of mower $117.

AN OLD SUBSCRIBER.

Addison County, Vt., Sept., 1860.

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FROSTS.

There was in Franklin county, Me., a frost July 28, killing buckwheat, cucumbers, &c., in many places, and in some very frosty places, corn and potatoes. Also, September 2d and 4th, frosts quite general on low lands and along rivers, doing some injury. Occasionally a piece of corn was spoiled and more India and buckwheat than in July; yet in spite of the frosts crops will be more than an average in Northern Maine. O. W. TRUE.

For the New England Farmer.

THE THUNDER SHOWER.

MR. EDITOR:—On the morning of the 8th of August the thermometer stood at 70° at sunrise, and 98° at 12 M. The forenoon was so sultry and so hot that people who labored suffered severely. A little past the middle of the day a few clouds of singular appearance suddenly collected a little at the southwest of my dwelling-house, which were soon succeeded by low murmuring thunder and the appearance of rain. This little beginning of a shower advanced so rapidly that those people who were a little way from home were thoroughly saturated with rain unexpectedly. About this time portentous clouds were to be seen collecting in the northern atmosphere, and advancing rapidly to form a junction with the forces from the southwest. While advancing to meet each other the battle in the elements commenced in earnest, the lighter artillery commenced the action by sudden electric discharges which seemed to shatter and rend the heavens, and on the two bodies meeting, (who can abide His wrath?) the great magazines of electricity exploded in seeming vengeance at every object below. I sat and saw the streaming fire issuing from the clouds and coming down in every fantastic shape, some zigzag, some in such large bolts as to split into branches, but all tending directly to the earth, to the horror of all people, and more especially of those who had barns well stowed with new hay. The shower continued till near night, with a frightful roaring and violent discharges of heaven's artillery, till every one seemed to be impressed that the damage must have been very great in the destruction of life and property as far as the shower extended.

Reports have been afloat that barns were struck in the towns of Andover, Middleton, Reading, Danvers, and other places. It would be very gratifying to many others as well as myself, to be informed in the reports of these barn-burnings how many had lightning conductors on them, or whether they were all destitute of lightning rods. There seems to be a prevailing interest in the public mind in regard to the utility of lightning rods. The best evidence is a statement of facts, and the best way to come at facts, is to know whether those buildings which were furnished with rods were entirely exempt from disaster, or

whether the lightning made no discrimination between protected and unprotected buildings. Some people are of the opinion that the attractive powers of the rods are very limited and feeble, while others have great confidence in their power; if we could obtain the statistics of this and past years, from every person in the State who has had a building struck by lightning, it would furnish us with knowledge we much desire.

Silas Brown.

North Wilmington, Aug. 13, 1860.

The August Pioneer Grape.—A sample of this grape has been handed us by Mr. A. D. Merrill, of Lynn. He calls it a native, and it is a good grape for a wild one. However, it costs no more to cultivate a fine quality grape than a poor one,—so that whenever we plant a grape vine it should be the best we can command, if it is one that will bear the climate and be productive.

New Seedling Pears.—We have before us a few seedling pears, from the garden of Mr. Jacob Shaw, 2d, of Abington. They have the color of the Bartlett, and something of its shape, though not so long in the neck, or upper part. To our taste it is not equal to the Bartlett—a friend standing by and eating one says it is better.

LADIES' DEPARTMENT.

FRUITS IN WINTER.

By a little forethought and trouble, the fruits which just now are so abundant, may be kept fresh until midwinter, or spring even. The frugal housewife has long been accustomed to "do up" a few strawberries, make a little raspberry or blackberry jam, and occasionally to preserve a jar of peaches, pears or quinces; but she has always been very careful to use as many pounds of white sugar as there were pounds of fruit, and even then they have had to be examined frequently, and sometimes "scalded" to prevent "spoiling." Again when "done up," the result has been a very good sweetmeat, but with little of the natural flavor of the fruit remaining. Experience and frequent trials have discovered better modes of preservation, and now the different kinds of berries, "tree fruits," with tomatoes, and other garden vegetables—are stowed away in cans and bottles, with the full assurance that they will open any time in the course of two years, with much of their original freshness and flavor. A few practical suggestions to those inexperienced in the "preserving art" are necessary.

First, boil your fruit in a porcelain kettle, with a small quantity of water. Add white sugar, usually one-fourth as much as there is fruit. The sugar might be omitted entirely, were it not that it would be necessary to add it whenever the sweetmeats are taken out for use. Some prefer making a strong syrup, by using one pound of sugar to a pint of water, and pouring this into the bottles after the fruit has been placed in them, to fill up the interstices. Having boiled your fruit for a few moments, fill your cans quickly, seeing that every particle of air is expelled. Have your corks ready, softened in warm water, and also a mixture composed of one pound common resin to one ounce tallow or lard well melted. Having pressed in the corks, coat them over with the cement. To guard securely against air, it is a good plan to invert the bottles in patty-pans, or other small vessels filled with melted cement. This will render the cans or bottles absolutely air-tight. After cooling, set away in a dark room if possible, and no further trouble need be apprehended. Pears and quinces should be "cooked" until soft.

FINDING FAULT WITH YOUR CHILDREN.

It is at times necessary to censure and punish, but very much may be done by encouraging children when they do well. Be, therefore, more careful to express your approbation of good conduct, than your disapprobation of bad. Nothing can more discourage a child, than a spirit of incessant fault-finding on the part of the parent. And hardly any thing can exert a more injurious influence upon the disposition both of the parent and child. There are two great motives influencing human actions—hope and fear. Both of these are, at times, necessary. But who would not prefer to have her child influenced to good conduct, by a desire of pleasing, rather than by the fear of offending? If a mother never expresses her gratification when her children do well, and is always censuring them when she sees anything amiss, they are discouraged and unhappy. Their dispositions become hardened and soured by ceaseless fretting; and at last, finding that whether they do well or ill, they are equally found fault with, they relinquish all efforts to please, and become heedless of reproaches.

A Good Woman never Grows Old.—Years may pass over her head, but if benevolence and virtue dwell in her heart, she is cheerful as when the spring of life opened to her view. When we look at a good woman, we never think of her age; she looks charming as when the rose of youth first bloomed on her cheek. That rose has not faded yet—it will never fade. In her neighborhood, she is the friend and benefactor. Who does not respect and love the woman who has passed her days in acts of kindness and mercy? We repeat, such a woman can never grow old. She will always be fresh and buoyant in spirits, and active in humble deeds of mercy and benevolence.

Mary.—Who does not love the plain, yet beautiful name, Mary? It is from the Hebrew, and means a "teardrop." What sweet and joyous hours of other days—what pleasing associations the very name calls up in every heart? Who that does not love the name, and has not had every ligament of his heart moved to melody at its mention? If there be anything gentle, valued, and womanly, what Mary possesses it not? Was it not Mary who was

"Last at the cross, and earliest at the grave?"

And was not Mary the mother of the Saviour of the world? Blessed be the name of Mary.